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FCC Statement

(Federal Communications Commission)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the service representative or an experienced radio/TV technician for help.

Warning

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the manufacturer for compliance with the above standards could void your authority to operate the equipment.

IMPORTANT SAFETY INSTRUCTIONS

Follow basic safety precautions, including those listed below, to reduce the risk of fire, electric shock, and injury to persons when using any electrical equipment:

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using this equipment with a telephone line (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit (DC Output 20V, 11A minimum).

CAUTION

Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.

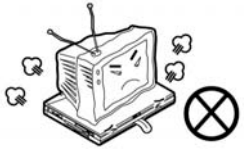
TO REDUCE THE RISK OF FIRE, USE ONLY NO. 26 AWG OR LARGER, TELE-COMMUNICATION LINE CORD

This Computer's Optical Device is a Laser Class I Product

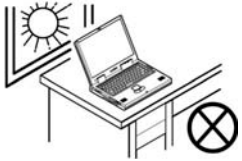
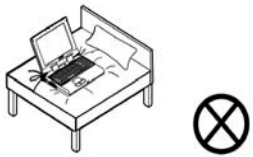
Instructions for Care and Operation

The notebook computer is quite rugged, but it can be damaged. To prevent this, follow these suggestions:

1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.

Do not expose the computer to any shock or vibration.	*Do not place it on an unstable surface.*	*Do not place anything heavy on the computer.*
		

2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.

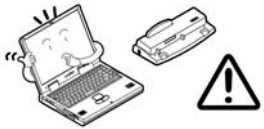
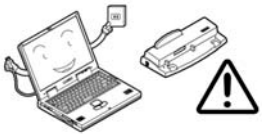
Do not expose it to excessive heat or direct sunlight.	*Do not leave it in a place where foreign matter or moisture may affect the system.*	*Don't use or store the computer in a humid environment.*	*Do not place the computer on any surface that will block the vents.*
			

3. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.

4. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.

Do not turn off the power until you properly shut down all programs.	*Do not turn off any peripheral devices when the computer is on.*	*Do not disassemble the computer by yourself.*	*Perform routine maintenance on your computer.*

5. **Take care when using peripheral devices**.

Use only approved brands of peripherals.	*Unplug the power cord before attaching peripheral devices.*
	

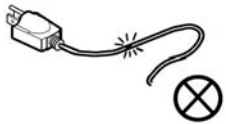
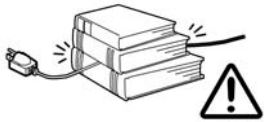
Power Safety

The computer has specific power requirements:

Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

- Only use a power adapter approved for use with this computer.
- Your AC/DC adapter may be designed for international travel but it still requires a steady, uninterrupted power supply. If you are unsure of your local power specifications, consult your service representative or local power company.
- The power adapter may have either a 2-prong or a 3-prong grounded plug. The third prong is an important safety feature; do not defeat its purpose. If you do not have access to a compatible outlet, have a qualified electrician install one.
- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies (i.e. AC/DC adapter or car adapter).

Do not plug in the power cord if you are wet.	*Do not use the power cord if it is broken.*	*Do not place heavy objects on the power cord.*
		

Battery Precautions

- Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
- Do not continue to use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire.
- Recharge the batteries using the notebook's system. Incorrect recharging may make the battery explode.
- Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
- Keep children away from, and promptly dispose of a damaged battery. Always dispose of batteries carefully. Batteries may explode or leak if exposed to fire, or improperly handled or discarded.
- Keep the battery away from metal appliances.
- Affix tape to the battery contacts before disposing of the battery.
- Do not touch the battery contacts with your hands or metal objects.

Battery Disposal & Caution

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Cleaning

Do not apply cleaner directly to the computer; use a soft clean cloth.
Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

Servicing

Do not attempt to service the computer yourself. Doing so may violate your warranty and expose you and the computer to electric shock. Refer all servicing to authorized service personnel. Unplug the computer from the power supply. Then refer servicing to qualified service personnel under any of the following conditions:

- When the power cord or AC/DC adapter is damaged or frayed.
- If the computer has been exposed to rain or other liquids.
- If the computer does not work normally when you follow the operating instructions.
- If the computer has been dropped or damaged (do not touch the poisonous liquid if the LCD panel breaks).
- If there is an unusual odor, heat or smoke coming from your computer.

Removal Warning

When removing any cover(s) and screw(s) for the purposes of device upgrade, remember to replace the cover(s) and screw(s) before turning the computer on.

Travel Considerations

Packing

As you get ready for your trip, run through this list to make sure the system is ready to go:

1. Check that the battery pack and any spares are fully charged.
2. Power off the computer and peripherals.
3. Close the display panel and make sure it's latched.
4. Disconnect the AC/DC adapter and cables. Stow them in the carrying bag.
5. The AC/DC adapter uses voltages from 100 to 240 volts so you won't need a second voltage adapter. However, check with your travel agent to see if you need any socket adapters.
6. Put the notebook in its carrying bag and secure it with the bag's straps.
7. If you're taking any peripherals (e.g. a printer, mouse or digital camera), pack them and those devices' adapters and/or cables.
8. Anticipate customs - Some jurisdictions may have import restrictions or require proof of ownership for both hardware and software. Make sure your "papers" are handy.

Power Off Before Traveling

Make sure that your notebook is completely powered off before putting it into a travel bag (or any such container). Putting a notebook which is powered on in a travel bag may cause the Vents/Fan Intakes to be blocked. To prevent your computer from overheating make sure nothing blocks the Vent/Fan Intakes while the computer is in use.

On the Road

In addition to the general safety and maintenance suggestions in this preface, and Chapter 8: Troubleshooting, keep these points in mind:

Hand-carry the notebook - For security, don't let it out of your sight. In some areas, computer theft is very common. Don't check it with "normal" luggage. Baggage handlers may not be sufficiently careful. Avoid knocking the computer against hard objects.

Beware of Electromagnetic fields - Devices such as metal detectors & X-ray machines can damage the computer, hard disk, floppy disks, and other media. They may also destroy any stored data - Pass your computer and disks around the devices. Ask security officials to hand-inspect them (you may be asked to turn it on). **Note**: Some airports also scan luggage with these devices.

Fly safely - Most airlines have regulations about the use of computers and other electronic devices in flight. These restrictions are for your safety, follow them. If you stow the notebook in an overhead compartment, make sure it's secure. Contents may shift and/or fall out when the compartment is opened.

Get power where you can - If an electrical outlet is available, use the AC/DC adapter and keep your battery(ies) charged.

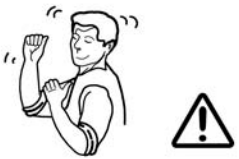
Keep it dry - If you move quickly from a cold to a warm location, water vapor can condense inside the computer. Wait a few minutes before turning it on so that any moisture can evaporate.

Developing Good Work Habits

Developing good work habits is important if you need to work in front of the computer for long periods of time. Improper work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. The following are some tips to reduce the strain:

- Adjust the height of the chair and/or desk so that the keyboard is at or slightly below the level of your elbow. Keep your forearms, wrists, and hands in a relaxed position.
- Your knees should be slightly higher than your hips. Place your feet flat on the floor or on a footrest if necessary.
- Use a chair with a back and adjust it to support your lower back comfortably.
- Sit straight so that your knees, hips and elbows form approximately 90-degree angles when you are working.
- Take periodic breaks if you are using the computer for long periods of time.

Remember to:



- Alter your posture frequently.
- Stretch and exercise your body several times a day.
- Take periodic breaks when you work at the computer for long periods of time. Frequent and short breaks are better than fewer and longer breaks.

Lighting

Proper lighting and comfortable display viewing angle can reduce eye strain and muscle fatigue in your neck and shoulders.

- Position the display to avoid glare or reflections from overhead lighting or outside sources of light.
- Keep the display screen clean and set the brightness and contrast to levels that allow you to see the screen clearly.
- Position the display directly in front of you at a comfortable viewing distance.
- Adjust the display-viewing angle to find the best position.

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Chapter 1: Quick Start Guide

Overview

This Quick Start Guide is a brief introduction to the basic features of your computer, to navigating around the computer and to getting your system started. The remainder of the manual covers the following:

- **Chapter 2** The Storage Devices (**hard disk**, **optical device**, **Card Reader**, **PC Card**), **Mouse**, **Audio** & **Printer**.
- **Chapter 3** The computer's **power** saving options.
- **Chapter 4** The installation of the **drivers** and utilities essential to the operation or improvement of some of the computer's subsystems.
- **Chapter 5** An outline of the computer's built-in software, or **BIOS** (Basic Input Output System).
- **Chapter 6** Instructions for **upgrading** your computer.
- **Chapter 7** A quick guide to the computer's **Wireless LAN, Bluetooth**, **TV Tuner** and **PC Camera** modules (some of which may be **optional** depending on your purchase configuration).
- **Chapter 8** A **troubleshooting** guide.
- **Appendix A** A definition of the **interface**, **ports**/**jacks** which allow your computer communicate with external devices.
- **Appendix B** Information on the **NVIDIA** Video driver controls.
- **Appendix C** The computer's **specification**.

Advanced Users

If you are an advanced user you may skip over most of this Quick Start Guide. However you may find it useful to refer to *"Drivers & Utilities" on page 4 - 1*, *"BIOS Utilities" on page 5 - 1* and *"Upgrading The Computer" on page 6 - 1* in the User's Manual. You may also find the notes marked with a ✎ of interest to you.

Notes

Check the light colored boxes with the mark above to find detailed information about the computer's features.

Beginners and Not-So-Advanced Users

If you are new to computers (or do not have an advanced knowledge of them) then the information contained in this Quick Start Guide should be enough to get you up and running. Eventually you should try to look through all the documentation (more detailed descriptions of the functions, setup and system controls are covered in the remainder of the User's Manual), but do not worry if you do not understand everything the first time. Keep this manual nearby and refer to it to learn as you go. You may find it useful to refer to the notes marked with a ✎ as indicated in the margin. For a more detailed description of any of the interface ports and jacks see *"Interface (Ports & Jacks)" on page A - 1*.

Warning Boxes

No matter what your level please pay careful attention to the warning and safety information indicated by the symbol. Also please note the safety and handling instructions as indicated in the *Preface*.

Not Included

Operating Systems (e.g. *Windows XP etc.*) and applications (e.g. word processing, spreadsheet and database programs) have their own manuals, so please consult the appropriate manuals.

System Software

Your computer may already come with system software pre-installed. Where this is not the case, or where you are re-configuring your computer for a different system, you will find this manual refers to the following operating systems:

- ***Microsoft Windows XP Home & Professional Editions (with Service Pack 2)***

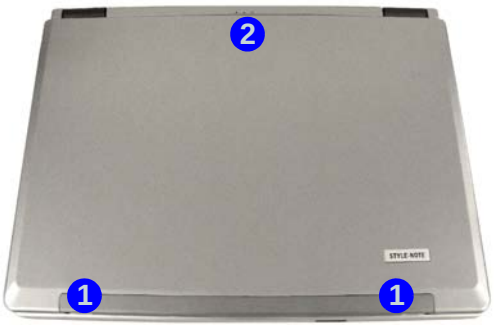
Drivers

If you are installing new system software, or are re-configuring your computer for a different system, you will need to install the appropriate drivers. Drivers are programs which act as an interface between the computer and a hardware component e.g. a wireless network module. It is very important that you install the drivers in the order listed in ***Table 4 - 1, on page 4 - 6***. You will be unable to use most advanced controls until the necessary drivers and utilities are properly installed. If your system hasn't been properly configured (your service representative may have already done that for you), refer to ***"What to Install" on page 4 - 1*** for installation instructions.

Ports and Jacks

See ***"Ports and Jacks" on page A - 2*** for a description of the interface (ports & jacks) which allow your computer to communicate with external devices, connect to the internet etc.

System Startup



1. LCD Latches
2. LED Power & Communication Indicators

1. Remove all packing materials.
2. Place the computer on a stable surface.
3. Securely attach any peripherals you want to use with the notebook (e.g. keyboard and mouse) to their ports.
4. Attach the AC/DC adapter to the DC-In jack at the rear of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.
5. Move and hold the LCD latches 1 in the direction of the arrows to release the top cover.
6. Raise the lid/LCD to a comfortable viewing angle, and press the power button to turn the computer “on”.
7. Adjust the LCD panel to a comfortable viewing angle.
8. The LED indicators 2 show the power and battery status of the computer.

Figure 1 - 1 **- Top Panel with LCD Closed**

Shutdown

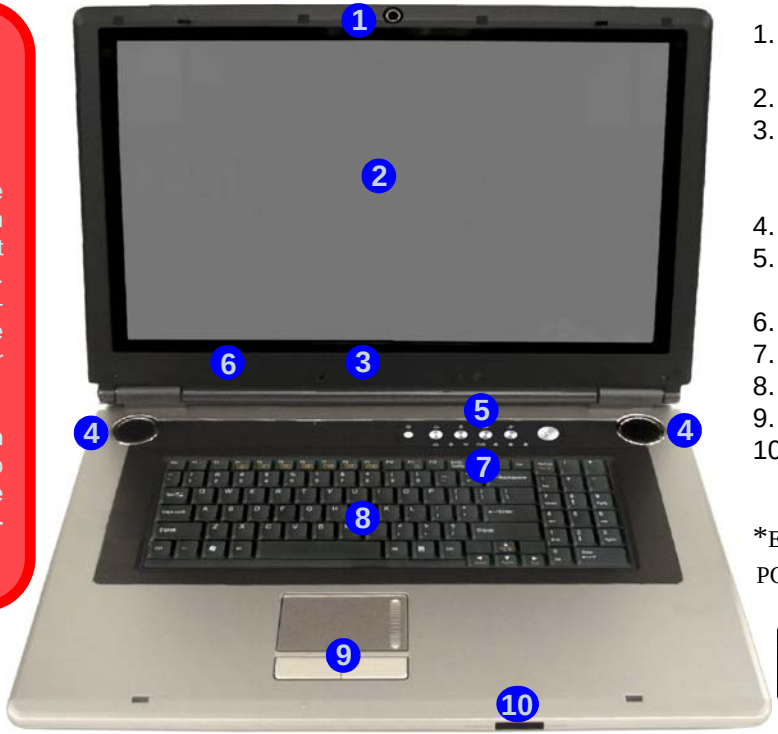
Please note that you should always shut your computer down by choosing the **Shut Down/Turn Off Computer** command from the **Start** menu in ***Windows*.** This will help prevent hard disk or system problems.

System Map: Top View with LCD Panel Open

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are **OFF** if you are using the computer aboard aircraft.

The key combination **Fn + F11** toggles power to the **WLAN** module, **the Ap-key** to the **Bluetooth** module.



1. Optional Built-In PC Camera
2. LCD
3. LED Power & Communication Indicators
4. Speakers
5. AP-Key Buttons & Power Button
6. Built-In Microphone
7. LED Status Indicators
8. Keyboard
9. TouchPad and Buttons
10. Consumer Infrared Transceiver*

*Enabled with **Optional** Mini-PCI TV Tuner Only

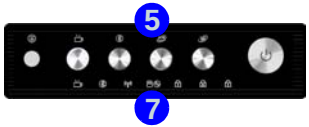


Figure 1 - 2 **- Top View with LCD Panel Open**

LED Indicators

The two sets of LED indicators (**LED Status Indicators** and **LED Power & Communication Indicators**) on the computer display helpful information about the current status of the computer.

Table 1 - 1 **- LED Status Indicators**

Icon	Color	Description
	Green	The (**optional**) PC Camera is powered On
	Green	The (**optional**) Bluetooth Module is powered On
	Green	The (**optional**) Wireless LAN Module is powered On
	Green	Hard Disk Activity
	Green	Number Lock Activated
	Green	Caps Lock Activated
	Green	Scroll Lock Activated (to activate press Fn & Scr Lk)

Table 1 - 2 **- LED Power & Communication Indicators**

Icon	Color	Description
	Orange	DC Power is Plugged In
	Green	The Computer is On
	Blinking Green	The Computer is in Stand by Mode
	Orange	The Battery is Charging
	Green	The Battery is Fully Charged
	Blinking Orange	The Battery Has Reached Critically Low Power Status
	Blinking Green	New Mail Has Arrived

AP-Key Buttons

These buttons power on/off the **optional** PC Camera and Bluetooth modules, access the internet and e-mail, and enable/disable high performance video.

Table 1 - 3 **- AP-Key Buttons**

AP-Key	Function
	Enable/Disable High Performance Video
	Enable/Disable the **optional** PC Camera Module
	Enable/Disable the **optional** Bluetooth Module
	Activate the Default E-mail Program
	Activate the Default Internet Browser

3D Ap-Key Button

Use this button to enable/disable high performance video when powered by the AC/DC adapter (the 3D Ap-Key button will be illuminated in blue when in high performance video mode).

If you switch from AC Power to battery power the system will automatically change to a lower performance video mode setting. **High Performance Video can not be enabled when the system is battery powered**.

The system will retain in memory the last known video performance setting if you switch back from battery to AC power.

Function Keys & Numeric Keypad

The keyboard has an embedded numerical keypad for easy numeric data input (see ***Figure 1 - 3***).

Activate the **Number Lock** feature by pressing the **Num Lk** key at the top right of the keyboard. You may check if **Number Lock** is enabled or not by looking at the LED status indicators.

Table 1 - 4 **- Function Keys**

Keys	Description
Fn	Function Key
Fn + F1	Touchpad Toggle
Fn + F2	SRS WOW Surround Sound Toggle
Fn + F3	Mute Toggle
Fn + F4	Sleep Toggle
Fn + F5	Decrease Audio Volume
Fn + F6	Increase Audio Volume
Fn + F7	Display Toggle
Fn + F8	Decrease LCD Brightness
Fn + F9	Increase LCD Brightness
Fn + F11	WLAN Module Toggle
Fn + Scr Lk	Scroll Lock Toggle

Figure 1 - 3 **- Keyboard**

Other Keyboards

If your keyboard is damaged or you just want to make a change, you can use any standard USB keyboard. The system will detect and enable it automatically. However special functions/hot keys unique to the system's regular keyboard may not work.

System Map: Front & Rear Views

Overheating

To prevent your computer from overheating make sure nothing blocks the vent(s)/fan intake(s) while the computer is in use.

7-Pin S-Video-Out Jack

The 7-pin S-Video Out Jack requires an adapter cable (7-pin S-Video plug to 4-pin S-Video jack adapter) in order to connect to a standard S-Video cable (the y-cable pictured includes a composite video jack).

Figure 1 - 4
Front & Rear Views

1. LCD Latches
2. Consumer Infrared Transceiver*
3. 7-Pin S-Video-Out Jack
4. DVI-Out Port
5. DC-In Jack
6. Vent/Fan Intake
7. RJ-11 Phone Jack
8. 2 * USB 2.0 Ports
9. Serial Port
10. S-Video-In Jack*
11. Security Lock Slot

*Enabled with **Optional** Mini-PCI TV Tuner Only

System Map: Left View

Figure 1 - 5
Left View

1. S/PDIF-Out Jack
2. Line-In Jack
   (see page ***A - 3***)
3. Microphone-In Jack
4. Headphone-Out Jack
5. Optical Device Drive Bay
   (for CD/DVD Device)

CD Emergency Eject

If you need to manually eject a CD/DVD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. Do not use a sharpened pencil or similar object that may break and become lodged in the hole.

Media Warning

Don't try to remove a floppy disk/CD/DVD while the system is accessing it. This may cause the system to "crash".

Changing DVD Regional Codes

Go to the **Control Panel** and double-click **System > Hardware** (tab), click **Device Manager**, then click the **+** next to **DVD/CD-ROM drives**. Double-click on the DVD-ROM device to bring up the **Properties** dialogue box, and select the **DVD Region** (tab) to bring up the control panel to allow you to adjust the regional code (see ***"DVD Regional Codes" on page 2 - 5***).

DVD region detection is device dependent, not OS-dependent. You can select your module's region code **5** times. The fifth selection is permanent. This cannot be altered even if you change your operating system or you use the module in another computer.

System Map: Right View

Figure 1 - 6 **- Right View**

1. PC Card Slot
2. Mini-IEEE 1394a Port
3. 3 * USB 2.0 Ports
4. TV Antenna Jack*
5. 4-in-1 Card Reader
6. Infrared Transceiver (see page *2 - 12*)
7. RJ-45 LAN Jack

*Enabled with **Optional** Mini-PCI TV Tuner Only

4-in-1 Card Reader

The card reader allows you to use the most popular digital storage card formats:

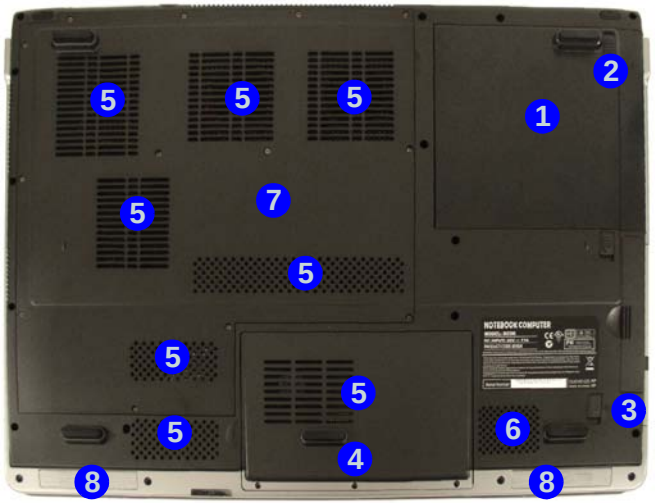
MMC (MultiMedia Card) / SD (Secure Digital) / MS (Memory Stick) / MS Pro (Memory Stick Pro)

Mini-IEEE 1394a

The Mini-IEEE 1394a port only supports **SELF POWERED** IEEE 1394a devices.

System Map: Bottom View

Figure 1 - 7 **- Bottom View**



1. Battery
2. Battery Release Latch
3. CD/DVD Device Release Latch
4. Hard Disk Bay Cover
5. Vent/Fan Intake
6. Sub Woofer
7. Component Bay Cover
8. Speakers

CPU

The CPU is not a user serviceable part. Opening this compartment, or accessing the CPU in any way, may violate your warranty.

Battery Information

Always completely discharge, then fully charge, a new battery before using it. Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges. See *"Battery Information" on page 3 - 9* for full instructions.

Windows XP Start Menu & Control Panel

Most of the control panels, utilities and programs within ***Windows XP*** are accessed from the **Start** menu. When you install programs and utilities they will be installed on your hard disk drive, and a shortcut will usually be placed in the **Start** menu and/or the desktop. You can customize the look of the **Start** menu by right-clicking the **Start** menu and selecting **Properties** from the menu.

Figure 1 - 8
Start Menu & Control Panel

In many instances throughout this manual you will see an instruction to open the **Control Panel**. The **Control Panel** is accessed from the **Start** menu. The **Control Panel** allows you to configure the settings for most of the key features in ***Windows*** (e.g. power, video, network, audio etc.). ***Windows XP*** provides basic control panels for many of the features, however many new control panels are added (or existing ones are enhanced) when you install the drivers listed in ***Table 4 - 1, on page 4 - 6***. To see all controls it may be necessary to toggle off *Category View*.

Video Features

This computer features an NVIDIA Scalable Link Interface (**SLI**) that improves graphic quality and performance by combining **dual** NVIDIA GPUs in a single system to allow the two graphics cards to run in parallel. You can switch display devices, and configure display options, from the **Display Properties** control panel in ***Windows*** as long as the appropriate **video driver** is installed.

To access Display Properties in ***Windows***:

1. Click **Start**, point to **Settings** and click **Control Panel** (or just click **Control Panel**).
2. Double-click **Display** (icon) - In the **Appearances and Themes** category.
3. Click **Settings** (tab) in the **Display Properties** dialog box.
   (You can also access **Display Properties** by right-clicking the desktop and scrolling down and clicking **Properties**. Click **Settings** and adjust as above.)
4. Move the slider to the preferred setting in **Screen area/resolution** 1 (***Figure 1 - 9 on page 1 - 15***).
5. Click the arrow, and scroll to the preferred setting In **Colors/Color quality** 2 (***Figure 1 - 9 on page 1 - 15***).
6. Click **Advanced** (button) 3 (***Figure 1 - 9 on page 1 - 15***) to bring up the **Advanced properties** tabs.
7. Click **GeForce Go ...** (tab).
8. Clicking the tabs or **Additional Properties** allows you to make any video adjustments you require.

Display Devices & Options

Besides the built-in LCD, you can also use an **external VGA monitor** (CRT)/**external Flat Panel Display** or **TV** as your display device (**Note: SLI Multi-GPU supports only single display mode**). A VGA monitor/Flat Panel Display connects to the DVI-Out port, a TV to the S-Video-Out jack. See ***Table 1 - 5, on page 1 - 15*** for a summary of the display modes available, and see ***"NVIDIA Video Driver Controls" on page B - 1*** for more detailed video information.

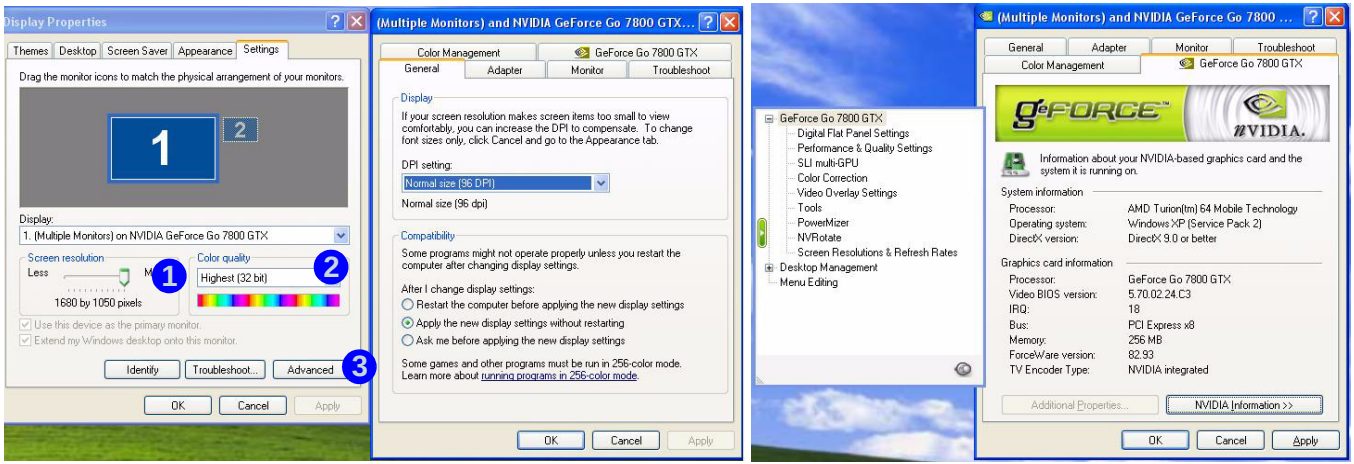


Figure 1 - 9 **- Display Properties Desktop**

Display Mode	Description
Single	One of the connected displays is used as the display device
Clone*	Both connected displays output the same view
Dualview*	Both connected displays are treated as separate devices, and act as a virtual desktop

Table 1 - 5 **Display Options**

***Note: SLI Multi-GPU supports only single display mode (disable SLI Multi-GPU before switching to Clone or Dualview modes).**

Power Management Features

The **Power Options** control panel in ***Windows*** (see page ***1 - 13***) allows you to configure power management features for your computer. You may conserve power through individual components such as the monitor or hard disk (by means of **Power Schemes**), or you may use either **Stand by** or **Hibernate** mode to conserve power throughout the system (enable **Hibernate** support from the control panel as pictured in ***Figure 1 - 10***). Pay attention to the instructions on battery care in ***"Battery Information" on page 3 - 9***.

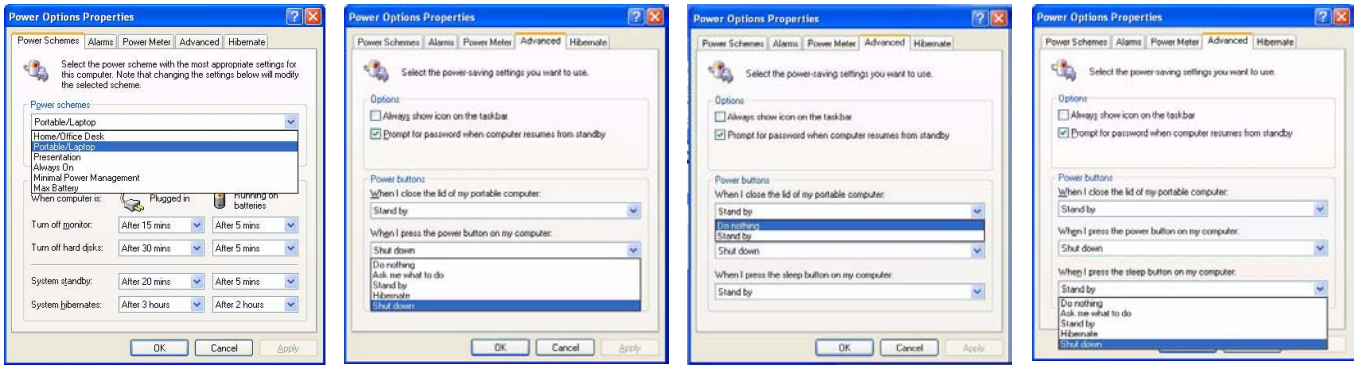


Figure 1 - 10 **- Power Options**

The computer's **power button**, **sleep button** (**Fn** + **F4** key combination), and **Lid Sensor** may be set to send the computer in to either **Stand by** or **Hibernate** mode.

Power Saving and Performance

Power Schemes may have an affect on your computer performance (see ***"Power Schemes" on page 3 - 4***).

Chapter 2: Storage Devices, Mouse, Audio & Printer

Overview

Read this chapter to learn more about the following main features and components of the computer:

- Hard Disk Drive
- Optical Device
- 4-in-1 Card Reader
- PC Card Slot
- Auto Mail Checker
- TouchPad and Buttons/Mouse
- Audio Features
- Configuring the Infrared Settings for FIR
- Adding a Printer

Power Safety

Before attempting to access any of the internal components of your computer please ensure that the machine is not connected to the AC power, and that the machine is turned off. Also ensure that all peripheral cables, including phone lines, are disconnected from the computer.

Hard Disk Drive

The hard disk drive is used to store your data in the computer. The hard disk can be taken out to accommodate other 2.5" serial (SATA II) hard disk drives with a height of 9.5 mm. The hard disk 1 is accessible from the bottom of your computer as seen below. Further details on removing and inserting the hard disk are available in *"Upgrading the Hard Disk Drive(s)" on page 6 - 4*.

Figure 2 - 1
Hard Disk Location

Optical Device

There is a bay for a 5.25" optical (CD/DVD) device (12.7mm height). The actual device will depend on the model you purchased (see *"Storage Options" on page C - 3*). The optical device is usually labeled "**Drive D:**" and may be used as a boot device if properly set in the **BIOS** (*"Boot Menu" on page 5 - 12*).

Loading Discs

To insert a CD/DVD, press the open button 1 and carefully place a CD/DVD onto the disc tray with label-side facing up (use just enough force for the disc to click onto the tray's spindle). Gently push the CD/DVD tray in until its lock "clicks" and you are ready to start. The busy indicator 2 will light up while data is being accessed, or while an audio/video CD, or DVD, is playing. If power is unexpectedly interrupted, insert an object such as a straightened paper clip into the emergency eject hole 3 to open the tray.

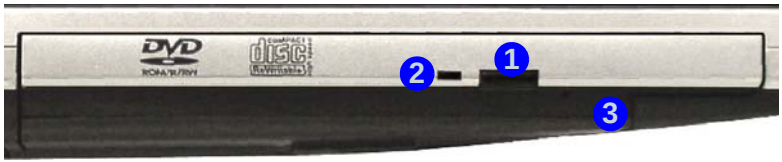


Figure 2 - 2
Optical Device

Sound Volume Adjustment

How high the sound volume can be set depends on the setting of the volume control within ***Windows***. Click the **Volume** icon on the taskbar to check the setting.

Peripherals must be connected before you turn on the system.

CD Emergency Eject

If you need to manually eject a CD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. However please do NOT use a sharpened pencil or similar object that may break and become lodged in the hole.

Disk Eject Warning

Don't try to remove a CD/DVD while the system is accessing it. This may cause the system to "crash".

Handling CDs or DVDs

Proper handling of your CDs/DVDs will prevent them from being damaged. Please follow the advice below to make sure that the data stored on your CDs/DVDs can be accessed.

Note the following:

- Hold the CD or DVD by the edges; do not touch the surface of the disc.
- Use a clean, soft, dry cloth to remove dust or fingerprints.
- Do not write on the surface with a pen.
- Do not attach paper or other materials to the surface of the disc.
- Do not store or place the CD or DVD in high-temperature areas.
- Do not use benzene, thinner, or other cleaners to clean the CD or DVD.
- Do not bend the CD or DVD.
- Do not drop or subject the CD or DVD to shock.

DVD Regional Codes

To change the DVD regional codes see *"Changing DVD Regional Codes" on page 1 - 10*.

DVD Regional Coding	
Region	**Geographical Location**
1	USA, Canada
2	Western Europe, Japan, South Africa, Middle East & Egypt
3	South-East Asia, Taiwan, South Korea, The Philippines, Indonesia, Hong Kong
4	South & Central America, Mexico, Australia, New Zealand
5	N Korea, Russia, Eastern Europe, India & Most of Africa
6	China

Table 2 - 1
DVD Regional Coding

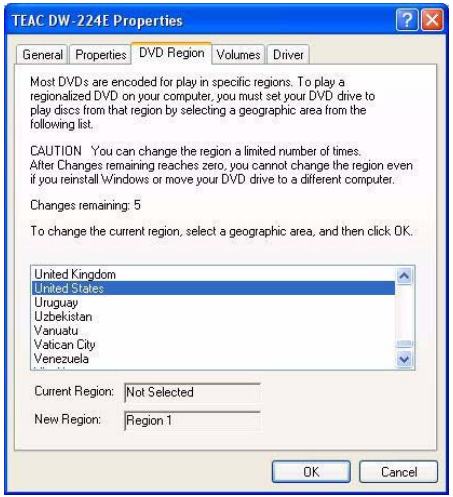

TEAC DW-224E Properties
General
Properties
DVD Region
Volumes
Driver
Most DVDs are encoded for play in specific regions. To play a regionalized DVD on your computer, you must set your DVD drive to play discs from that region by selecting a geographic area from the following list.
CAUTION You can change the region a limited number of times. After Changes remaining reaches zero, you cannot change the region even if you reinstall Windows or move your DVD drive to a different computer.
Changes remaining: 5
To change the current region, select a geographic area, and then click OK.
United Kingdom
United States
Uruguay
Uzbekistan
Vanuatu
Vatican City
Venezuela
Current Region:
Not Selected
New Region:
Region 1
OK
Cancel

Figure 2 - 3
DVD Regions

Card Reader Cover

Make sure you keep the cover in the card reader when not in use. This will help prevent foreign objects and/or dust getting in to the card reader.

4-in-1 Card Reader

The card reader allows you to use some of the latest digital storage cards. Push the card into the slot and it will appear as a removable device.

- MMC (MultiMedia Card)
- SD (Secure Digital)
- MS (Memory Stick)
- MS Pro (Memory Stick Pro)

Figure 2 - 4
Right View

1. Card Reader

PC Card Slot

The computer is equipped with a PCMCIA 3.3V/5V slot for **one type II** PC Card.

Inserting and Removing PC Cards

- Align the PC Card with the slot and push it in until it locks into place.
- To remove a PC Card, simply press the eject button 1 next to the slot.

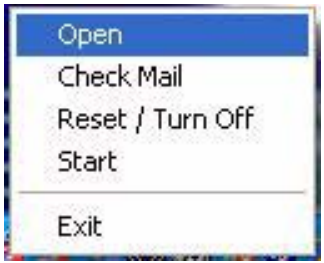
Figure 2 - 5
PC Card Slot

Auto Mail Checker

After you have installed the driver for the Auto Mail Checker program (see ***"Auto-Mail Checker" on page 4 - 11***) you may then configure it to give you notification when you receive new mail. You must be online to receive this notification (note that this program only supports the **POP3** protocol), and your default mail program does not need to be open.

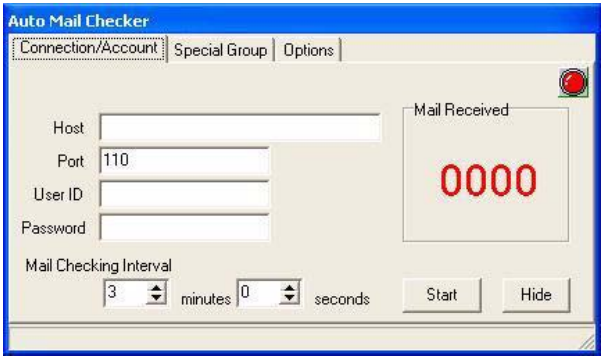
When the program is run, the Auto Mail Checker appears as an icon in the **task-bar** (to run the program go to **Start** > **Programs/All Programs** > **Auto Mail Checker** > **Auto Mail Checker)**. Right clicking on the icon will bring up the following options menu. If you have not input your mail account data, then you will be prompted to do so.

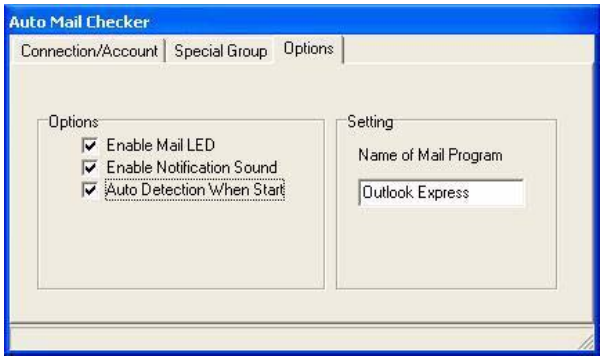
Figure 2 - 6
Auto Mail Checker



Select **Open** to bring up the control panel for the program.

You may then configure the options for your mailserver, name, password, program and method(s) of notification.





Note

Check with your Internet Service Provider, network administrator or Mail Service provider for details on what to put on these pages.

Figure 2 - 7
Auto Mail Checker Account Setup and Options

Mouse Driver

If you are using an external mouse your operating system may be able to auto-configure your mouse during its installation or only enable its basic functions. Be sure to check the device's user documentation for details.

TouchPad and Buttons/Mouse

The TouchPad is an alternative to the mouse; however, you can also add a mouse to your computer through one of the USB ports. The TouchPad buttons function in much the same way as a two-button mouse. The central button may be configured to function as you require.

Once you have installed the TouchPad driver (see page ***4 - 10***) you can configure the functions by double-clicking the TouchPad driver icon in the taskbar. You may then configure the TouchPad tapping, buttons, scrolling, pointer motion and sensitivity options to your preferences. The TouchPad may be toggled on/off by means of the **Fn + F1** key combination.

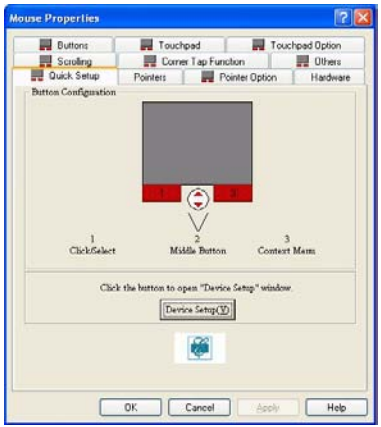


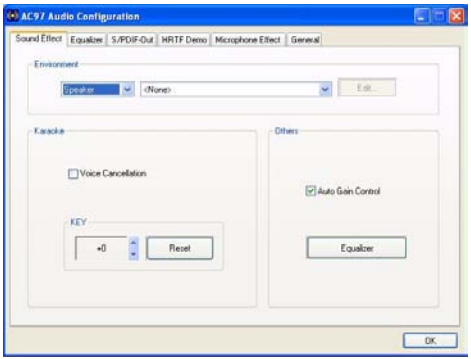
Figure 2 - 8
Mouse Properties

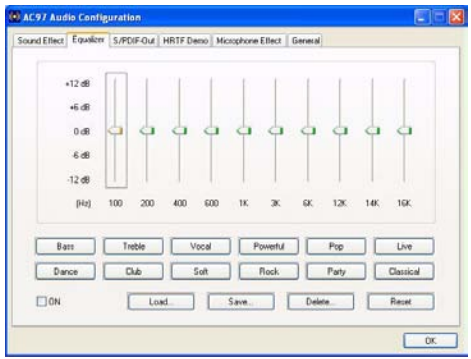
Audio Features

You can configure the audio options on your computer from the **Sounds and Audio Devices** *Windows* control panel (see *Figure 1 - 8 on page 1 - 13*), or from the **Sound Manager** icon in the taskbar/control panel (this will bring up the AC97 Audio Configuration menu). Adjust the volume may be adjusted by using the **Fn + F5/F6** key combination.

The audio system features SRS **WOW** Surround Sound Technology inside (SRS/ TruSurround/ TruBass / Focus Enhancement). SRS **WOW** Surround Sound may be toggled on/off using the **Fn + F2** key combination.

Note that audio input through **Line-in** will default to the mute setting. To set up your audio sources to play though the Line-in jack go to the **Sounds and Audio Devices** *Windows* control panel and make sure the **Mute** box is not ticked.





Sound Volume Adjustment

How high the sound volume can be set depends on the setting of the volume control within ***Windows***. Click the Volume icon on the taskbar to check the setting.

Figure 2 - 9
AC97 Audio Configuration Menus

Infrared Communication

The infrared transceiver operates on a “Line of Sight”.

Make sure nothing is blocking the “Line of Sight” between your system’s transceiver and the destination’s transceiver.

Configuring the Infrared Settings for FIR

To configure your computer’s infrared port (on the right of the computer) for Far Infrared (FIR) communication follow these steps:

1. Click **Start**, point to **Settings** and click **Control Panel** (or just click **Start > Control Panel**).
2. Double-click **Wireless Link** (Printers and Other Hardware Category) icon.
3. Click **Hardware** (tab), and click the **Properties** button, then click the **Advanced** (tab).
4. Select **“Infrared Transceiver A”** and change the **Value** to **“HP HSDL-2300/3600”**.
5. Click **OK > OK**.
6. Restart the computer if prompted to do so.

You can enable/disable the infrared transceiver in the BIOS (see ***“I/O Device Configuration (Advanced Menu)” on page 5 - 9***). For further information, please refer to the manual of the device you wish to connect.

Adding a Printer

The most commonly used peripheral is a printer. The following conventions will help you to add a printer, however it is always best to refer to the printer manual for specific instructions and configuration options.

USB Printer

Most new printers have a USB interface connection. You may use any one of the ports to connect the printer.

Install Instructions:

1. Set up the printer according to its instructions (unpacking, paper tray, toner/ink cartridge etc.).
2. Turn ON the computer.
3. Turn ON the printer.
4. Connect the printer's USB cable to one of the USB ports on the computer.
5. ***Windows*** will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.

Parallel Printer

This is still a very common type of printer. The install instructions are in the sidebar (you will need to purchase a parallel to USB converter).

Parallel Printer

After setting up the printer attach the parallel cable to the printer.

Connect the printer's parallel cable to the Parallel to USB converter, and then plug the converter into the USB port.

Turn ON the printer, then turn ON the computer.

Windows will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.

Chapter 3: Power Management

Overview

To conserve power, especially when using the battery, your computer uses the ACPI power management system. Power management conserves power by controlling individual components of the computer (the monitor and hard disk drive) or the whole system.

This chapter covers:

- The Power Sources
- Turning on the Computer
- Power Schemes
- System Power Options
- Configuring the Power Button
- Battery Information

Advanced Configuration and Power Interface

The **ACPI** interface provides the computer with enhanced power saving techniques and gives the operating system (OS) direct control over the power and thermal states of devices and processors. For example, it enables the OS to set devices into low-power states based on user settings and information from applications. ACPI is fully supported in *Windows XP*.

OS Note

Power management functions will vary slightly depending on your operating system. For more information it is best to refer to the user's manual of your operating system.

(**Note**: All pictures used on the following pages are from the ***Windows XP*** OS.)

Power Button as Stand by or Hibernate Button

If you are using a fully ACPI-compliant OS, (such as Windows XP) you can use the OS's "Power Options" control panel to set the power button to send the system into Stand by or Hibernate mode (see your OS's documentation, or ***"Configuring the Power Button" on page 3 - 8*** for details).

The Power Sources

The computer can be powered by either an AC/DC adapter or a battery pack.

AC/DC Adapter

Use only the AC/DC adapter that comes with your computer. The wrong type of AC/DC adapter will damage the computer and its components (see page ***C - 5***).

1. Attach the AC/DC adapter to the DC-In jack at the rear of the computer.
2. Plug the AC power cord into an outlet, and then connect the AC power cord to the AC/DC adapter.
3. Raise the lid/LCD to a comfortable viewing angle.
4. Press the power button to turn "On".

Battery

The battery allows you to use your computer while you are on the road or when an electrical outlet is unavailable. Battery life varies depending on the applications and the configuration you're using. **To increase battery life, let the battery discharge completely before recharging (see *"How do I completely discharge the battery?" on page 3 - 12*).**

We recommend that you do not remove the battery. For more information on the battery, please refer to ***"Battery Information" on page 3 - 9***.

Turning on the Computer

Now you are ready to begin using your computer. To turn it on simply press the power button on the front panel.

When the computer is on, you can use the power button as a Stand by/Hibernate/Shutdown hot-key button when it is pressed for less than **4 seconds** (pressing and holding the power button for longer than this will shut the computer down). Use **Power Options** in the ***Windows*** control panel to configure this feature.

Forced Off

If the system "hangs", and the **Ctrl** + **Alt** + **Del** key combination doesn't work, press the power button for **4 seconds,** or longer**,** to force the system to turn itself off.

Shutdown

Note that you should always shut your computer down by choosing the **Shut Down/Turn Off Computer** command from the **Start** menu in ***Windows*****.** This will help prevent hard disk or system problems.

Resuming Operation

Press a key on the keyboard to have the system resume from Monitor or Hard Disk Stand by.

Power Schemes

You can set your computer to conserve power through individual components by means of **Power Schemes**. You can also adjust the settings for each scheme to set the monitor to turn off after a specified time, and the computer's hard disk motor to turn off if the hard disk drive has not been accessed for a specified period of time (if the system reads or writes data, the hard disk motor will be turned back on). The schemes may also be set to set a specified time for the system to enter **Stand by** or **Hibernate** modes (see *"System Power Options" on page 3 - 6*).

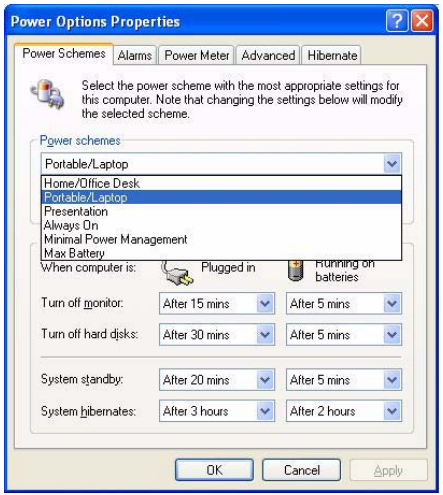


Figure 3 - 1
Power Schemes

Each ***Windows*** **Power Scheme** will also adjust the processor performance of your machine in order to save power. This is worth bearing in mind if you are experiencing any reduced performance (especially under DC/battery power).

Choose the **Home/Office Desk** scheme for maximum performance when the computer is powered from an AC power source. Choose the **Max Battery** scheme (bear in mind that this scheme may slow down the overall performance of the computer in order to save power) for maximum power saving when the computer is battery (DC power) powered.

Windows will use **Portable/Laptop** as the default scheme.

System Power Options

You can use the system power options to stop the computer's operation and restart where you left off. This system features **Stand by** and **Hibernate** sleep mode levels (**Hibernate** mode will need to be enabled by clicking the option in the **Hibernate** tab in the **Power Options** control panel - *Figure 3 - 2 on page 3 - 7*).

Hibernate Mode vs. Shutdown

Hibernate mode and Shutdown are the same in that the system is off and you need to press the power button to turn it on. Their main difference is:

When you come back from hibernation, you can return to where you last left off (what was on your desktop) without reopening the application(s) and file(s) you last used.

You can use either method depending on your needs.

Stand by Mode vs. Hibernate Mode

If you want to stay away from your work for just a while, you can put the system on Stand by instead of in hibernation. It takes a longer time to wake up the system from **Hibernate** mode than from **Stand by** mode.

Stand by

Stand by saves the least amount of power, but takes the shortest time to return to full operation. During Stand by the hard disk is turned off, and the CPU is made to idle at its slowest speed. All open applications are retained in memory. When you are not using your computer for a certain length of time, which you specify in the operating system, it will enter Stand by mode to save power.

Hibernate

Hibernate uses no power and saves all of your information on a part of the HDD before it turns the system off. Although it saves the most power it takes the longest time to return to full operation. You can set your computer to automatically enter Hibernate mode when the battery power is almost depleted. You will need to enable Hibernate mode from the **Hibernate** tab in the Power Options control panel. **The system will resume from Hibernate mode by pressing the power button**.

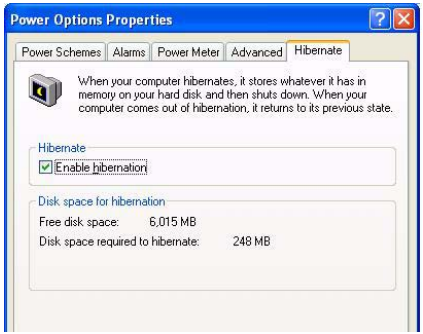

Power Options Properties
Power Schemes
Alarms
Power Meter
Advanced
Hibernate
When your computer hibernates, it stores whatever it has in memory on your hard disk and then shuts down. When your computer comes out of hibernation, it returns to its previous state.
Hibernate
Enable hibernation
Disk space for hibernation
Free disk space: 6,015 MB
Disk space required to hibernate: 248 MB

Figure 3 - 2
Enable Hibernation

System Resume

The system can resume from **Stand by** mode by:

- Pressing the power button
- Pressing the **Fn + F4** key combination
- An alarm resume that is enabled and expires
- An incoming call received on the modem (if enabled)
- Network card activity (if enabled)

Configuring the Power Button

The power button may be set to send the computer in to either **Stand by** or **Hibernate** mode. In **Stand by** mode, the LED will blink green. In **Hibernate** mode the LED will be off. If you are in a power saving mode set to save power through individual components (e.g. hard disk, monitor), the LED will remain green.

Figure 3 - 3
Power Options (Advanced - Power Buttons)

Power Button | Lid | Sleep/Resume (Sleep) Button

Sleep Button

You may also configure the **Sleep/Resume** key combination (**Fn + F4)** from the menu illustrated in ***Figure 3 - 3***. In ***Windows*** this is referred to as the **Sleep** button.

Battery Information

Please follow these simple guidelines to get the best use out of your battery.

New Battery

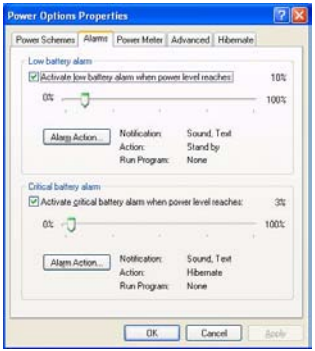
Always completely discharge, then fully charge, a new battery (see *"Battery FAQ" on page 3 - 12* for instructions on how to do this).

Battery Life

Your computer's battery life is dependent upon many factors, including the programs you are running, and peripheral devices attached. **Power Options** (you may set low battery **Alarms** and actions, and check the **Power Meter** from the **Power Options** control panel), and settings in the OS will help prolong the battery life if configured appropriately.

Low Battery Warning

When the battery is critically low, immediately connect the AC/DC adapter to the computer or save your work, otherwise, the unsaved data will be lost when the power is depleted.



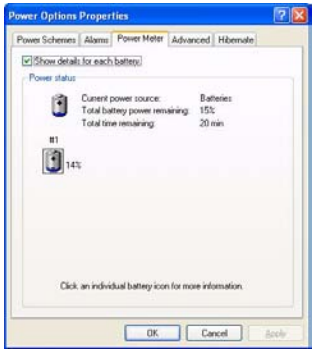


Figure 3 - 4
Power Options (Alarm & Power Meter)

Conserving Battery Power

To conserve battery power:

Lower the brightness level of the LCD display. The system will decrease LCD brightness slightly to save power when it is not powered by the AC/DC adapter.

Close modem or communication applications when they are not being used.

Remove any unused PC Cards from the computer (PC Cards quickly use up battery power even if the system enters sleep mode).

Disconnect any unnecessary external devices.

Battery life may be shortened through improper maintenance. **To optimize the life and improve its performance, fully discharge and recharge the battery at least once every 30 days**.

We recommend that you do not remove the battery yourself. If you do need to remove the battery for any reason see ***"Removing the Battery" on page 6 - 3***.

3D Ap-Key Button

The system will default to high performance video when powered by the AC/DC adapter (the 3D Ap-Key button will be illuminated in blue). If you switch from AC power to battery power the system will automatically change to a lower performance video mode setting in order to save power. **High Performance Video can not be enabled when the system is battery powered** (see ***"3D Ap-Key Button" on page 1 - 7***).

Recharging the Battery with the AC/DC Adapter

The battery pack automatically recharges when the AC/DC adapter is attached and plugged into an electrical outlet. If the computer is powered on, and in use, it will take several hours to fully recharge the battery. When the computer is turned off but plugged into an electrical outlet, battery charge time is less. (Refer to ***"LED Indicators" on page 1 - 6*** for information on the battery charge status, and to ***"Battery Information" on page 3 - 9*** for more information on how to maintain and properly recharge the battery pack.)

Proper handling of the Battery Pack

- DO NOT disassemble the battery pack under any circumstances
- DO NOT expose the battery to fire or high temperatures, it may explode
- DO NOT connect the metal terminals (+, -) to each other

Damaged Battery Warning

Should you notice any physical defects (e.g. the battery is bent out of shape after being dropped), or any unusual smells emanating from the notebook battery, shut your computer down immediately and contact your service center. If the battery has been dropped we do not recommend using it any further, as even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire. It is recommended that you replace your computer battery every two years.

Caution

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Battery FAQ

How do I completely discharge the battery?

Use the computer with battery power until it shuts down due to a low battery. Don't turn off the computer by yourself even when you see a message that indicates the battery is critically low, just let the computer use up all of the battery power and shut down on its own. Disable the **Power Options** functions in the **Control Panel**, especially any **Alarms** (**unclick** the tickboxes - see *3 - 9*) and **Schemes** (change all the settings to **Never** - see page *3 - 4*). As the battery nears the end of its life save and close any critical files.

How do I fully charge the battery?

When charging the battery, don't stop until the LED charging indicator light changes from orange to green.

How do I maintain the battery?

Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.

Chapter 4: Drivers & Utilities

This chapter deals with installing the drivers and utilities essential to the operation or improvement of some of the computer's subsystems. The system takes advantage of some newer hardware components for which the latest versions of most available operating systems haven't built in drivers and utilities. Thus, some of the system components won't be auto-configured with an appropriate driver or utility during operating system installation. Instead, you need to manually install some system-required drivers and utilities.The following operating system is covered.

- *Windows XP Professional and Home Editions (with Service Pack 2)*

What to Install

The ***Device Drivers & Utilities + User's Manual CD-ROM*** contains the drivers and utilities necessary for the proper operation of the computer. The drivers for all the modules (**WLAN**, **Bluetooth, PC Camera** and **TV Tuner**) are on the separate ***CD-ROMs*** supplied. ***Table 4 - 1, on page 4 - 6*** lists what you need to install manually according to your choice of the operating system, and **it is very important that the drivers are installed in the order indicated**.

Module Driver Installation

The procedures for installing drivers for the **Wireless LAN**, **Bluetooth**, **TV Tuner,** and **PC Camera** modules are provided in ***"Modules" on page 7 - 1***. Make sure that the drivers are installed in the order indicated in ***Table 4 - 1, on page 4 - 6***.

Navigate (Browse..) to D:

You will notice that many of the instructions for driver installation require you to "**Navigate (Browse) to D:**". We assume that you will install all drivers and utilities from the built-in CD device and it is assigned to "**Drive D:**". In addition, all file extensions can be seen

In this case "D:" is the drive specified for your CD device. Not all computers are setup the same way, and some computers have the CD listed under a different drive letter - e.g. if you have two hard drives (or hard disk partitions) one may be designated as "Drive C:" and the other as "Drive D:". In this case the CD device may be designated as "Drive E:" - Please make sure you are actually navigating to the correct drive letter for the CD device.

When you click the **Browse** (button) after clicking **Run** in the **Start** menu you will see the "**Look in:**" dialog box at the top of the **Browse** window. Click the scroll button to navigate to **My Computer** to display the devices and drive letters.

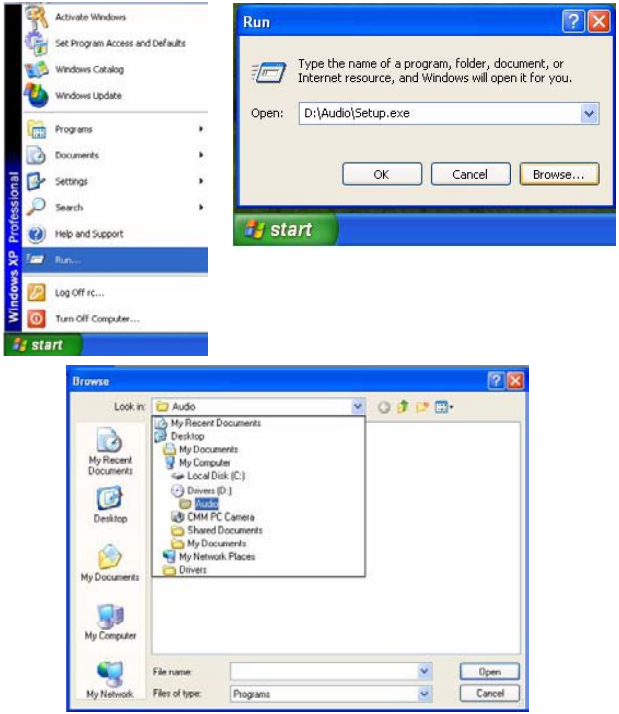


Figure 4 - 1 **- Navigate (Browse..) to..**

Service Packs

Check the warnings on the following pages regarding installation of the appropriate **Service Pack** for your ***Windows*** OS. If you are unsure of the Service Pack currently installed see below. Make sure you have installed the appropriate Service Pack **before** installing all the drivers.

Service Pack Installed

To see which **Service Pack** is currently installed on your computer go to the **General** tab of the **System** control panel. Right-click the **My Computer** icon on the desktop or in the **Start** menu and select **Properties**. The Service Pack currently installed on your system will be listed under the "**System**:" heading. (If no Service Pack information is listed, then no Service Pack is installed.)

Windows XP Service Pack 2

Make sure you install **Windows XP Service Pack 2** (or a Windows XP version which includes Service Pack 2) **before installing any drivers**. Service Pack 2 includes support for **USB 2.0**.

If you have **upgraded** the system by installing **Service Pack 2** (i.e. your Windows XP version does not include Service Pack 2) then follow these instructions:

1. Click **Start** (menu), point to **Settings** and click **Control Panel** (or click **Control Panel**).
2. Double-click **System** (icon); **System** (icon) is in **Performance and Maintenance** (category).
3. Click the **Hardware** (tab) > **Device Manager** (button).
4. Click "+" next to **Other Devices** (if its sub-items are not shown).
5. Right-click **Universal Serial Bus (USB) Controller** and select **Uninstall > OK** (if you don't see the item then there is no need to take any further action).
6. Restart the computer and it will find the USB 2.0 controller.

Authorized Driver Message

If you receive a message telling you that the driver you are installing is not authorized (**Digital Signature Not Found**), just click **Yes** or **Continue Anyway** to ignore the message and continue the installation procedure.

You will receive this message in cases where the driver has been released after the version of ***Windows*** you are currently using. All the drivers provided will have already received certification for ***Windows***.

Version Conflict Message

During driver installation if you encounter any "file version conflict" message, please click **Yes** to choose to keep the existing (newer) version.

Updating/Reinstalling Individual Drivers

If you wish to update/reinstall individual drivers it may be necessary to uninstall the original driver.To do this go to the **Control Panel** in the ***Windows OS*** and double-click the **Add/Remove Programs** item. **If you see the individual driver listed** (if not see below), uninstall it, following the on screen prompts (it may be necessary to restart the computer). Go to the appropriate section of the manual to complete the update/reinstall procedure for the driver in question.

If the driver is not listed in the **Add/Remove Programs** item:

1. Click **Start** (menu), point to **Settings** and click **Control Panel** (or click **Start > Control Panel**).
2. Double-click **System** (icon); System (icon) is in **Performance and Maintenance** (category).
3. Click **Hardware** (tab) > **Device Manager** (button).
4. Double-click the **device** you wish to update/reinstall the driver for (you may need to click "+").
5. Look for the **Update Driver** button (check the **Driver** tab) and follow the on screen prompts.

Driver Installation

Insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** and the ***Notebook Driver Installation*** application will run automatically. If you want to install the driver manually see ***Table 4 - 1, on page 4 - 6***.

1. Check the driver installation order from ***Table 4 - 1, on page 4 - 6*** (**the drivers must be installed in this order**) which is the same as that listed in the driver installation screen menu.
2. Double-click to select the name of the driver you wish to install.
3. Follow the instructions as listed in this chapter.
4. Make a note of the drivers you have installed.
5. If a restart is required after installing a driver, you will usually need to click the "**Yes/Finish**" button when prompted to restart the computer.
6. To get back to the *Driver Installation* screen click **Start** (menu) > **Run**... and navigate (**Browse..**) to **D:\setup.exe** and click **OK**.
   OR
   Double-click the **My Computer** icon, and then double-click the CD icon.

Figure 4 - 2
Driver Installation Screen

Windows XP (SP2)			
Driver	**Page**	**Driver**	**Page**
Chipset	*Page 4 - 7*	PCMCIA	*Page 4 - 10*
Video (VGA)	*Page 4 - 7*	AMD Processor	*Page 4 - 10*
Audio	*Page 4 - 8*	AutoMail Checker	*Page 4 - 11*
Modem	*Page 4 - 8*	WLAN Module	*Page 7 - 4* OR *Page 7 - 5*
LAN	*Page 4 - 9*	Bluetooth Module	*Page 7 - 7*
AP-Key Buttons	*Page 4 - 9*	TV Tuner Module	*Page 7 - 10*
TouchPad	*Page 4 - 10*	PC Camera Module	*Page 7 - 12*

Table 4 - 1 **- Driver Installation**

Manual Driver Installation

If you wish to install the drivers manually, click the **Exit** button to quit the ***Notebook Driver Installation*** application, and then follow the manual installation procedure for each driver. The manual installation procedure begins with instructions on how to browse to the executable file; “Click **Start** (menu) > **Run..**”.

Windows XP

Driver Installation Procedure

This section covers driver and utility installation instructions for *Windows XP Home & Professional*. Insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** and click the appropriate driver name from the **NoteBook Driver Installation menu** and follow the instructions to install the driver, or **Click Start** and navigate (**Browse..)** to follow the manual setup instructions.

New Hardware Found

If you see the message "**New Hardware Found**" (**Found New Hardware Wizard)** during the installation procedure (**other than when outlined in the driver install procedure**), click **Cancel** to close the window, and follow the installation procedure.

Chipset

1. Double-click **Chipset**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\00CHIPSET\setup.exe** and click **OK**.
2. Click **Next > Next > Next > Yes**.
3. Click **Finish** to restart the computer.

Video (VGA)

1. Double-click **VGA**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\01VGA\setup.exe** and click **OK**.
2. Click **Next** (click **Continue Anyway** if asked if you want to continue at any time).
3. Click **Finish** to restart the computer.

Audio

1. Double-click **Audio**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\02AUDIO\setup.exe** and click **OK**.
2. Click **Next**.
3. Click **Finish** to restart the computer.

Modem

1. Double-click **Modem**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\03MODEM\Setup.exe** and click **OK**.
2. Click **OK** > **OK**.
3. The modem is now ready for configuration.

Modem Country Selection

Be sure to check if the modem country selection is appropriate for you (**Control Panel** > **Phone and Modem Options**).

LAN

1. Double-click **Lan**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\04LAN\SetupYukonWin.exe** and click **OK**.
2. Click **Next**.
3. Click the button to accept the license and click **Next**.
4. Click **Install > Finish**.
5. The network settings can now be configured.

AP-Key Buttons

1. Double-click **AP-key**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\05AP-Key\AKSETUP.exe** and click **OK**.
2. Click **Next**.
3. Click **Finish** to restart your computer.

TouchPad

1. Double-click **Touchpad**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse...**) to **D:\Drivers\06TOUCHPAD\setup.exe** and click **OK**.
2. Click **Next** > **Next** (click **Continue Anyway** if asked if you want to continue at any time).
3. Click **Finish** to restart your computer.
4. You may then configure your TouchPad as outlined in ***"TouchPad and Buttons/Mouse" on page 2 - 10***.

PCMCIA

1. Double-click **PCMCIA**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\07PCMCIA\setup.exe** and click **OK**.
2. Click **Next**.
3. Click **Finish**.

AMD Processor

1. Double-click **AMD**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\08AMD\setup.EXE** and click **OK**.
2. Click **Next > Yes > Next > Next**.
3. Click the button "***Yes, I want to restart the computer now.***", and click **Finish** to restart the computer.

AutoMail Checker

1. Double-click **AUTOMAIL**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\09AUTOMAIL\SETUP.EXE** and click **OK**.
2. To continue click **Next > Next > Finish**.
3. Run the program from the **Auto Mail Checker** in the **Start** menu (**Start > Programs/All Programs > Auto Mail Checker**).
4. Click the icon in the taskbar to input the e-mail account details.
5. For further details see *"Auto Mail Checker" on page 2 - 8*.

Module Drivers

See the pages indicated for the driver installation procedures for any modules included in your purchase option.

Wireless LAN

See the appropriate install procedure for your WLAN module in either *"Intel WLAN Driver Installation" on page 7 - 4*, or *"MSI 6833B WLAN Driver Installation" on page 7 - 5*.

Bluetooth

See the install procedure in *"Bluetooth Driver Installation" on page 7 - 7*.

TV Tuner

See the install procedure for your TV Tuner module in *"Installing the AverTV Utility Software" on page 7 - 10*.

PC Camera

See the install procedure in *"PC Camera Module" on page 7 - 12*.

Chapter 5: BIOS Utilities

Overview

This chapter gives a brief introduction to the computer's built-in software:

Diagnostics: The **POST** (Power-On Self Test)

Configuration: The ***Setup*** utility
If your computer has never been set up, or you are making important changes to the system (e.g. hard disk setup), then you should review this chapter first and note the original settings found in ***Setup***. Even if you are a beginner, keep a record of the settings you find and any changes you make. This information could be useful if your system ever needs servicing.

There is one general rule: *Don't make any changes unless you are sure of what you are doing*. Many of the settings are required by the system, and changing them could cause it to become unstable or worse. If you have any doubts, consult your service representative.

BIOS Settings Warning

Incorrect settings can cause your system to malfunction. To correct mistakes, return to *Set-up* and restore the ***Set-up Defaults*** with <**F9**>.

POST Screen

1. **BIOS** information
2. CPU type
3. Memory status
4. Enter **Setup** prompt appears only during **POST**

Note: The **POST** screen as pictured is for guide-line purposes only.

The Power-On Self Test (POST)

Each time you turn on the computer, the system takes a few seconds to conduct a **POST**, including a quick test of the on-board RAM (memory).

As the **POST** proceeds, the computer will tell you if there is anything wrong. If there is a problem that prevents the system from booting, it will display a system summary and prompt you to run ***Setup***.

If there are no problems, the ***Setup*** prompt will disappear and the system will load the operating system. Once that starts, you can't get into ***Setup*** without rebooting.

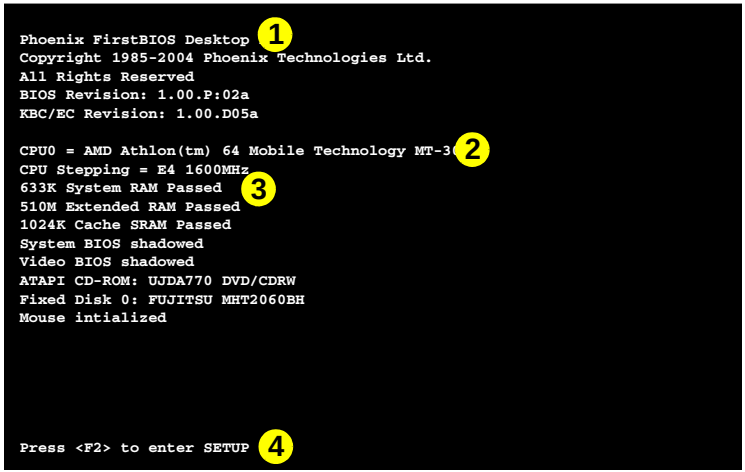


Figure 5 - 1
POST Screen

Failing the POST

Errors can be detected during the **POST**. There are two categories, “fatal” and “non-fatal”.

Fatal Errors

These stop the boot process and usually indicate there is something seriously wrong with your system. Take the computer to your service representative or authorized service center as soon as possible.

Non-Fatal Errors

This kind of error still allows you to boot. You will get a message identifying the problem (make a note of this message!) followed by the prompt:

- Press <F1> to resume
- <F2> to enter Setup

Press **F1** to see if the boot process can continue. It may work, without the correct configuration.

Press **F2** to run the **Setup** program and try to correct the problem. If you still get an error message after you change the setting, or if the “cure” seems even worse, call for help.

The Setup Program

The **Phoenix Setup** program tells the system how to configure itself and manage basic features and subsystems (e.g. port configuration).

Entering Setup

To enter ***Setup***, turn on the computer and press **F2** during the **POST**. The prompt (***Press F2 to Enter Setup***) seen in **Figure 5 - 1** on page *5 - 2* is usually present for a few seconds after you turn on the system. If you get a “Keyboard Error”, (usually because you pressed **F2** too quickly) just press **F2** again.

If the computer is already on, reboot using the **Ctrl + Alt + Delete** combination and then hold down **F2** when prompted. The ***Setup*** main menu will appear.

Setup Screens

The following pages contain additional advice on **portions** of the ***Setup***.

Along the top of the screen is a menu bar with five (**5**) menu headings. When you select a heading, a new screen appears. Scroll through the features listed on each screen to make changes to ***Setup***.

Instructions on how to navigate each screen are in the box along the bottom of the screen. If these tools are confusing, press **F1** to call up a **General Help** screen, and then use the arrow keys to scroll up or down the page.

The **Item Specific Help** on the right side of each screen explains the highlighted item and has useful messages about its options.

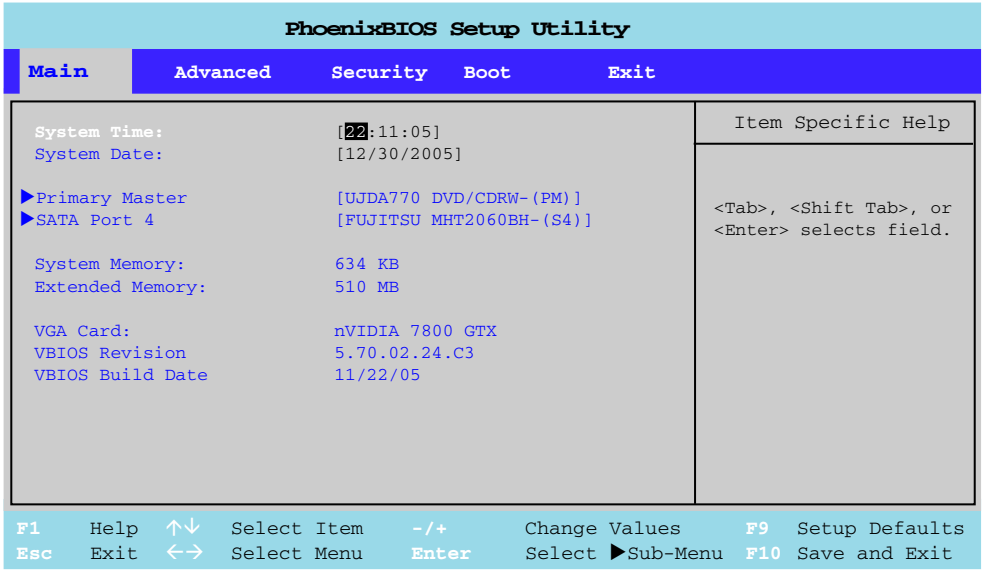
If you see an arrow ▶ next to an item, press **Enter** to go to a sub-menu on that subject. The sub-menu screen that appears has a similar layout, but the **Enter** key may execute a command.

Setup Menus

The **Setup** menus shown in this section are for **reference** only. Your computer's menus will indicate the configuration appropriate for your model and options.

Main Menu

Figure 5 - 2
Main Menu



System Time & Date (Main Menu)
The hour setting uses the 24-hour system (i.e., ØØ = midnight; 13 = 1 pm). If you can change the date and time settings in your operating system, you will also change these settings. Some applications may also alter data files to reflect these changes.

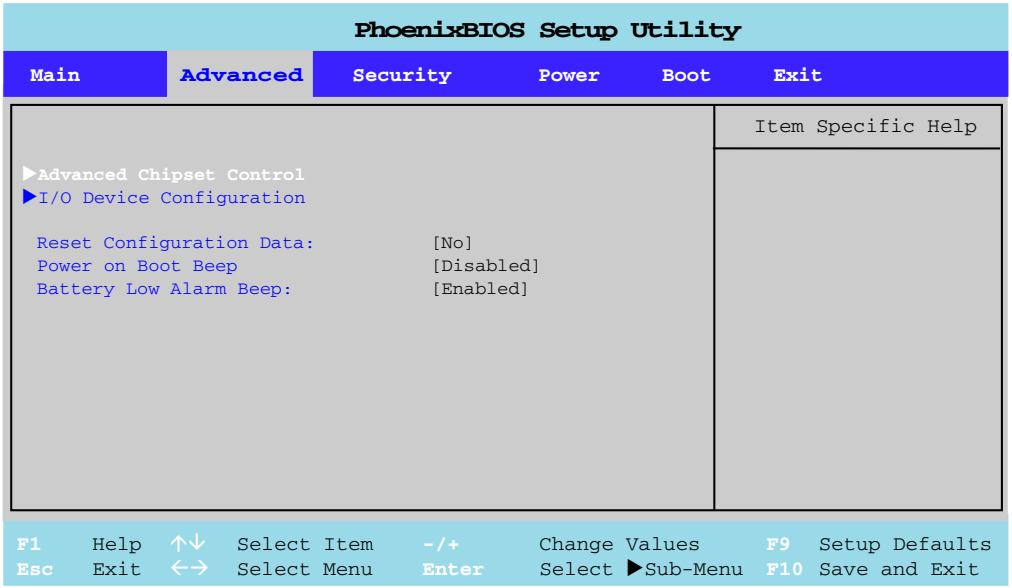
Primary Master/SATA Port 4 (Main Menu)
Pressing **Enter** here opens the sub-menu to show the configuration of hard disks and CD/DVD device(s) on the computer's IDE Channels. Use the **Auto** (Type:) setting to have the items configured automatically for you.

System/Extended Memory: (Main Menu)
This item contains information on the system memory, and is not user configurable. The system will auto detect the amount of memory installed.

The **Main** menu also contains information on your video card and video BIOS version.

Advanced Menu

Figure 5 - 3
Advanced Menu



Advanced Chipset Control (Advanced Menu)
Pressing **Enter** here will access the sub-menu which allows you to disable the audio and modem devices if required.

I/O Device Configuration (Advanced Menu)
The sub-menus under this item allow you to enable/disable the **Serial port A (Serial Mouse)**, and **FIR (Infrared) transceiver**.

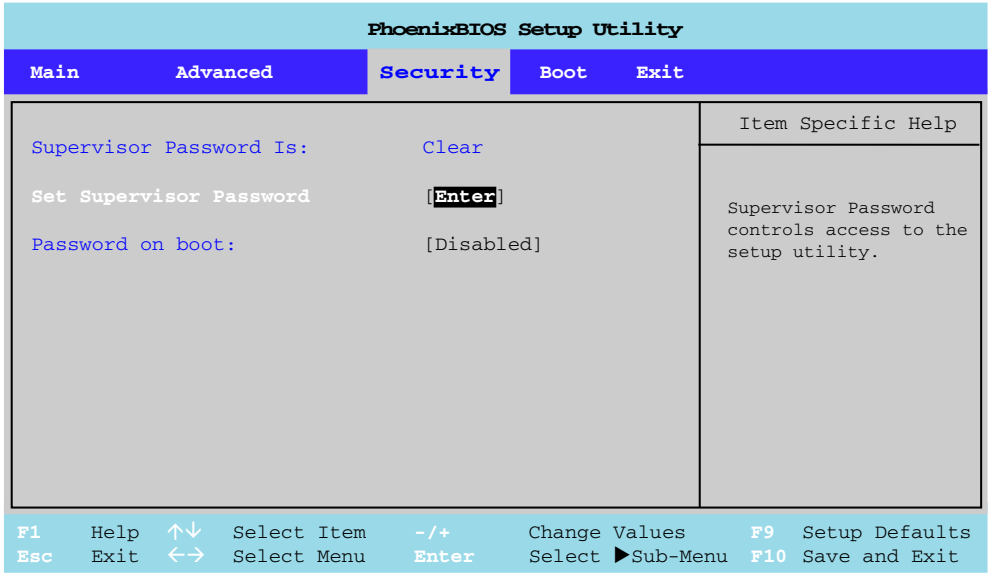
Reset Configuration Data (Advanced Menu)
This item is set to ***No*** as default. You can change the setting to ***Yes*** if you have installed a new add-on which has reconfigured the system, resulting in such a serious system conflict that the operating system is unable to boot.

Power On Boot Beep (Advanced Menu)
Use this menu to enable/disable the single beep sound at the end of the POST. This item is "***Disabled***" by default.

Battery Low Alarm Beep: (Advanced Menu)
Use this menu item to enable/disable the battery low alarm beep.

Security Menu

Figure 5 - 4
Security Menu



Security Menu

The changes you make here affect the access to the **Setup** utility itself, and also access to your machine as it boots up after you turn it on. These settings do not affect your machine or network passwords which will be set in your software OS.

Set Supervisor Password (Security Menu)
You can set a password for access to the ***Setup*** utility. This will not affect access to the computer OS, (only the ***Setup*** utility) unless you choose to set a *Password on Boot* (see over).

Password on boot: (Security Menu)
Specify whether or not a password (supervisor or user password) should be entered to boot the computer. If "***Enabled***" is selected, only users who enter a correct password can boot the system (**see the warning in the sidebar**). The default setting is "***Disabled***".

Note: To clear existing passwords press **Enter** and type the existing password, then press **Enter** for the new password (without typing any password entry) and **Enter** again to confirm the password clearance.

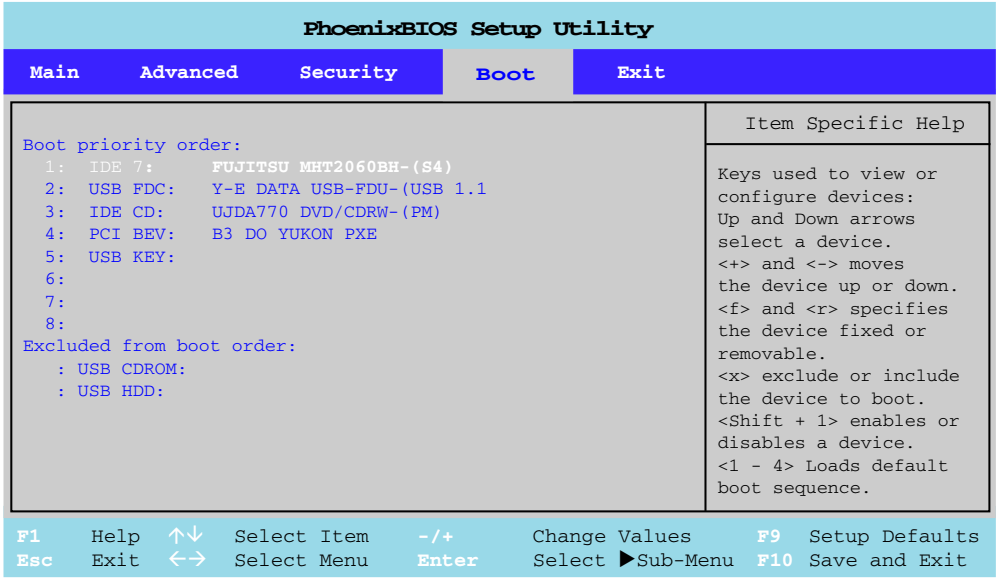
Password Warning

If you set a boot password (Password on boot is "Enabled"), **NEVER** forget your password.

The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.

Boot Menu

Figure 5 - 5
Boot Menu


PhoenixBIOS Setup Utility
Main
Advanced
Security
Boot
Exit
Boot priority order:
1: IDE 7: FUJITSU MHT2060BH-(S4)
2: USB FDC: Y-E DATA USB-FDU-(USB 1.1
3: IDE CD: UJDA770 DVD/CDRW-(PM)
4: PCI BEV: B3 DO YUKON PXE
5: USB KEY:
6:
7:
8:
Excluded from boot order:
: USB CDROM:
: USB HDD:
Item Specific Help
Keys used to view or configure devices:
Up and Down arrows select a device.
<+> and <-> moves the device up or down.
<f> and <r> specifies the device fixed or removable.
<x> exclude or include the device to boot.
<Shift + 1> enables or disables a device.
<1 - 4> Loads default boot sequence.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Select ▶Sub-Menu F10 Save and Exit

When you turn the computer on it will look for an operating system (e.g. ***WindowsXP***) from the devices listed in this menu, and **in this priority order**. If it cannot find the operating system on that device, it will try to load it from the next device in the order specified in the **Boot priority order**. Item specific help on the right is available to help you move devices up and down the order.

Exit Menu

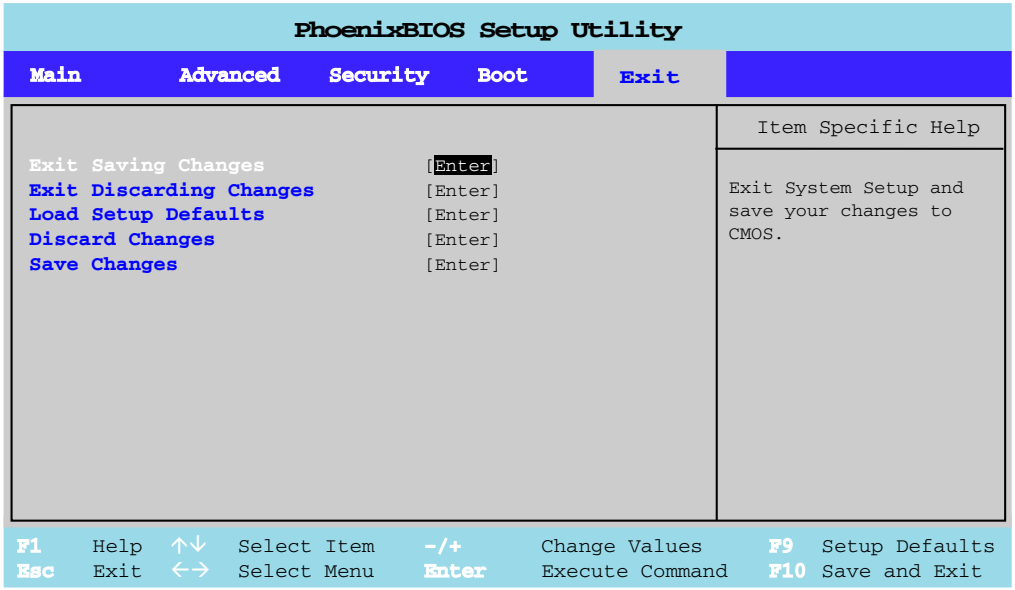

PhoenixBIOS Setup Utility
Main
Advanced
Security
Boot
Exit
Item Specific Help
Exit Saving Changes [Enter]
Exit Discarding Changes [Enter]
Load Setup Defaults [Enter]
Discard Changes [Enter]
Save Changes [Enter]
Exit System Setup and save your changes to CMOS.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Execute Command F10 Save and Exit

Figure 5 - 6
Exit Menu

Choosing to ***Discard Changes***, or ***Exit Discarding Changes***, will wipe out any changes you have made to the ***Setup***. You can also choose to restore the original ***Setup*** defaults that will return the ***Setup*** to its original state, and erase any previous changes you have made in a previous session.

Chapter 6: Upgrading The Computer

Overview

This chapter contains information on upgrading the computer. Follow the steps outlined to make the desired upgrades. If you have any trouble or problems you can contact your service representative for further help. Before you begin you will need:

- A small crosshead or Phillips screwdriver
- A small regular slotted (flathead) screwdriver
- An antistatic wrist strap

Before working with the internal components you will need to wear an antistatic wrist strap to ground yourself because static electricity may damage the components.

The chapter includes:

- Removing the Battery
- Upgrading the Hard Disk Drive(s)
- Upgrading the System Memory (RAM)
- Upgrading the Optical (CD/DVD) Device(s)
- Removing the Video Card(s)

Please make sure that you review each procedure before you perform it.

Warranty Warning

Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.

Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

When Not to Upgrade

These procedures involve opening the system's case, adding and sometimes replacing parts.You should **not** perform any of these upgrades if:

- Your system is still under warranty or a service contract
- You don't have all the necessary equipment
- You're not in the correct environment
- You doubt your abilities

Under any of these conditions, contact your service representative to purchase or replace the component(s).

Removal Warning

When removing any cover(s) and screw(s) for the purposes of device upgrade, remember to replace the cover(s) and screw(s) before turning the computer on.

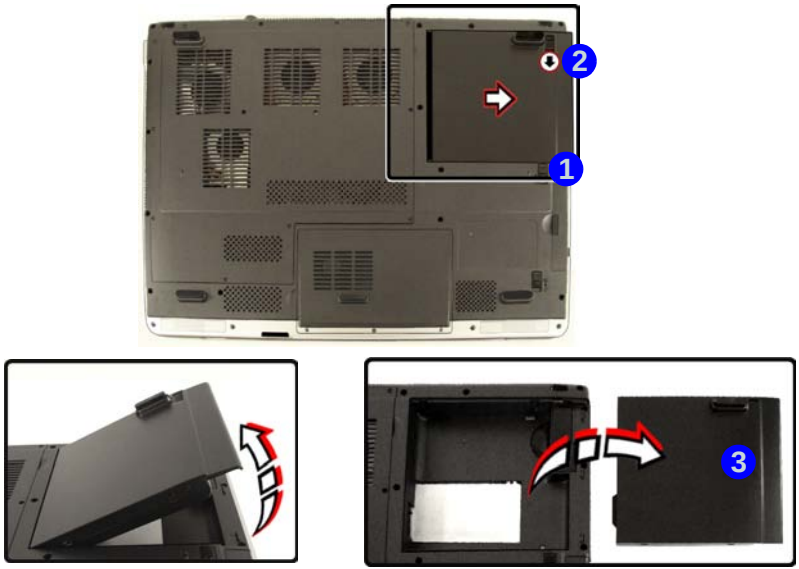
Upgrading the Processor

If you want to upgrade your computer by replacing the existing processor with a faster/new one you will need to contact your customer service representative. We recommend that you do not do this yourself, since if it is done incorrectly you may damage the processor or mainboard.

Removing the Battery

If you are confident in undertaking upgrade procedures yourself, for safety reasons it is best to remove the battery.

1. Turn the computer off, turn it over and remove the battery.
2. Slide latch 1 towards the unlock symbol and hold it in place, and slide latch 2 in the direction of the arrow.
3. Slide the battery 3 out and lift it up and out of the battery bay.



Warranty Warning

Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.

Figure 6 - 1
Battery Removal

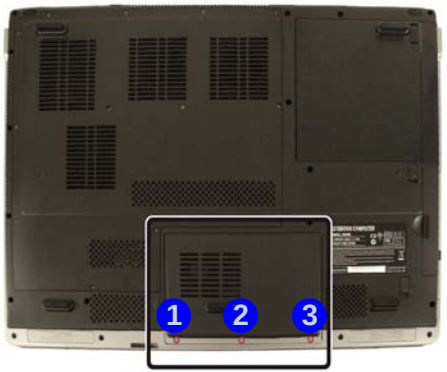
HDD System Warning

New HDD's are blank. Before you begin make sure:
You have backed up any data you want to keep from your old HDD.
You have all the CD-ROMs and FDDs required to install your operating system and programs.
If you have access to the internet, download the latest application and hardware driver updates for the operating system you plan to install. Copy these to a removable medium.

Upgrading the Hard Disk Drive(s)

The hard disk drive(s) can be taken out to accommodate other 2.5" serial (SATA II) hard disk drives with a height of 9.5mm (h) (see *"Storage Options" on page C - 3*). Follow your operating system's installation instructions, and install all necessary drivers and utilities (as outlined in *"Drivers & Utilities" on page 4 - 1*), when setting up a new hard disk.

1. Turn **off** the computer, and turn it over and remove the battery.
2. Locate the hard disk bay cover and remove screws 1 - 3.
3. Remove the bay cover 4.



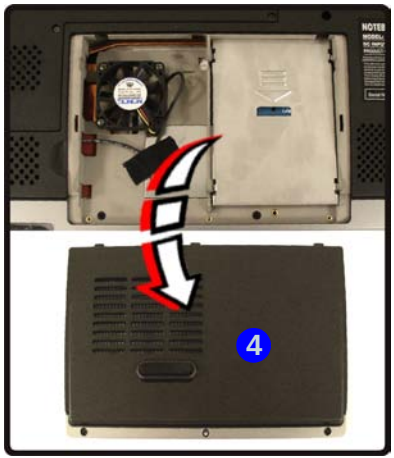


Figure 6 - 2
HDD Bay Cover Removal

4. Slide the hard disk assembly in the direction of the arrow 5.
5. Remove the hard disk assembly 6.
6. Remove screws 7 - 10 and separate the bracket 11 from the hard disk 12.
7. Reverse the process to install a new hard disk(s).

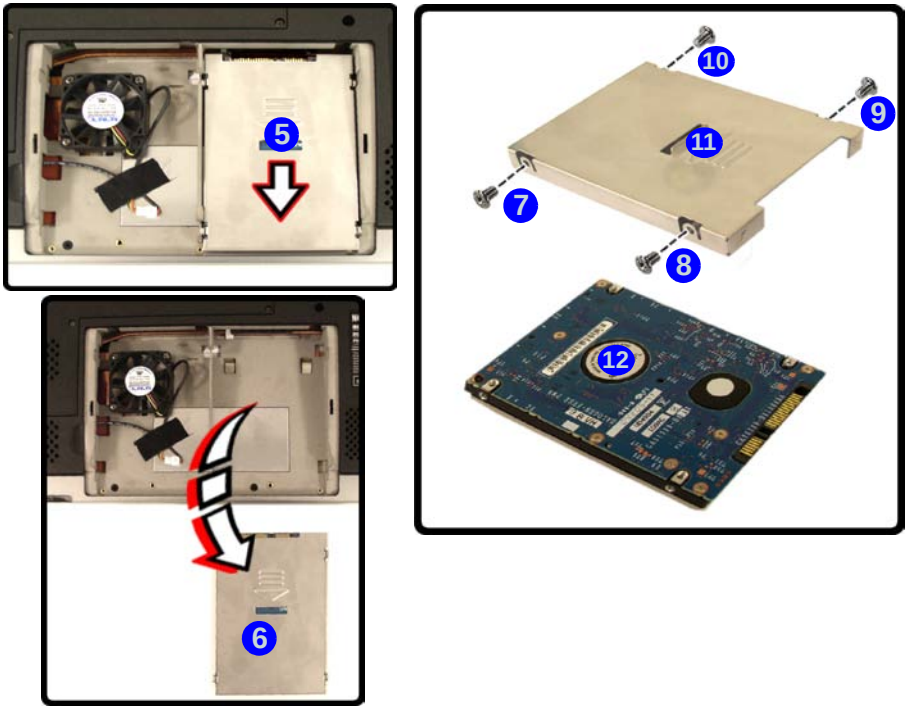


Figure 6 - 3
HDD Removal

Upgrading the System Memory (RAM)

The computer has **two** memory sockets for 200 pin Small Outline Dual In-line (SO-DIMM) **DDR** type memory modules (see *"Memory" on page C - 2*). The total memory size is automatically detected by the POST routine once you turn on your computer.

1. Turn **off** the computer, and turn it over and remove the battery.
2. Locate the component bay cover and remove screws 1 - 13.

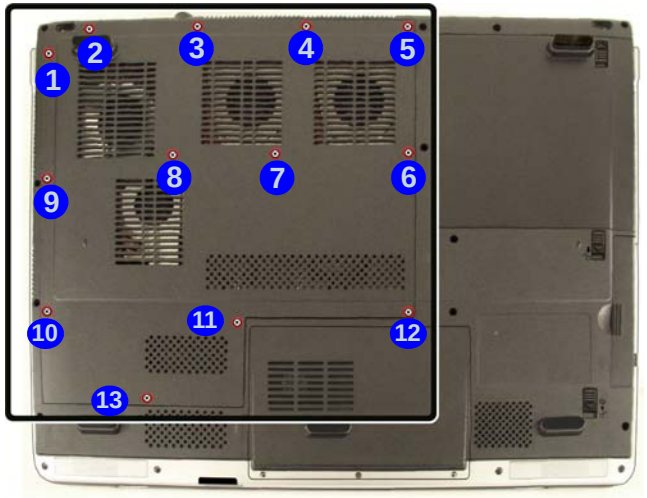


Figure 6 - 4
Bay Cover Screws

3. Remove the bay cover 14.

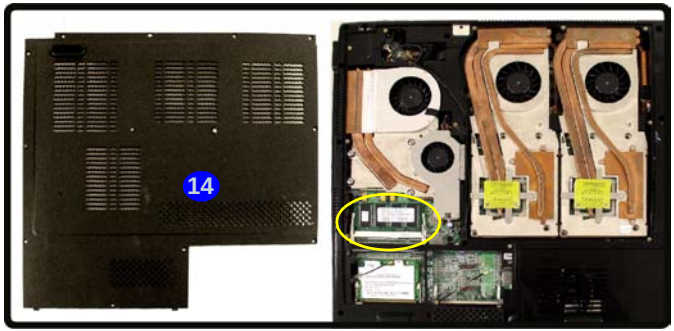


Figure 6 - 6
Bay Cover Removal

4. Gently pull the two release latches (15 & 16) on the sides of the memory socket in the direction indicated by the arrows in ***Figure 6 - 5***.

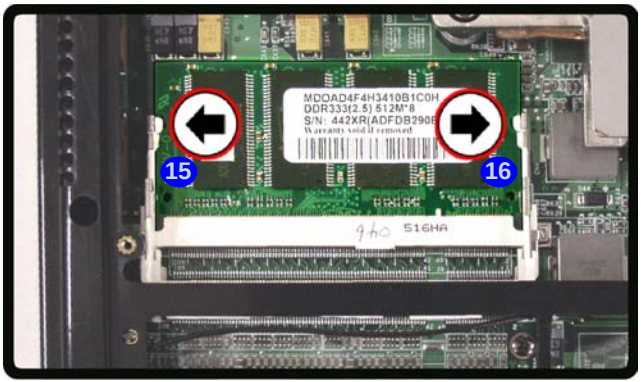


Figure 6 - 5
RAM Module Release

Contact Warning

Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

5. The RAM module 17 will pop-up, and you can remove it.

Figure 6 - 7
RAM Removal

6. Pull the latches to release the second module if necessary.
7. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory socket.
8. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the socket as it will go. DO NOT FORCE the module; it should fit without much pressure.
9. Press the module in and down towards the mainboard until the socket levers click into place to secure the module.
10. Replace the cover and screws (see ***Figure 6 - 4***).
11. Restart the computer to allow the BIOS will register the new memory configuration as it starts up.

Upgrading the Optical (CD/DVD) Device(s)

1. Turn the computer off, turn it over and remove the battery.
2. Slide the latch 1 towards the unlock symbol and hold it in place.
3. Slide the optical device out of the computer at point 2.

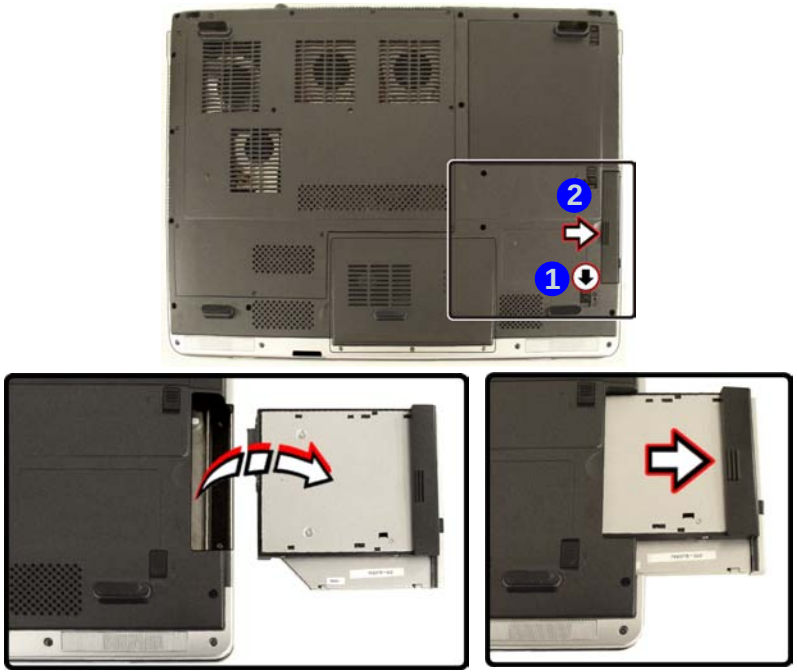


Figure 6 - 8
Removing the CD/ DVD Device(s)

Removing the Video Card(s)

1. Turn **off** the computer, and turn it over and remove the battery.
2. Locate the component bay cover and remove screws 1 - 13.
3. Remove the bay cover 14.

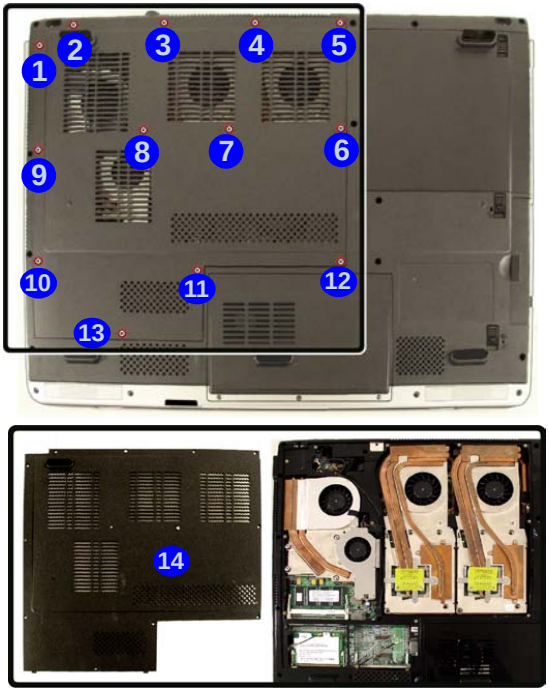
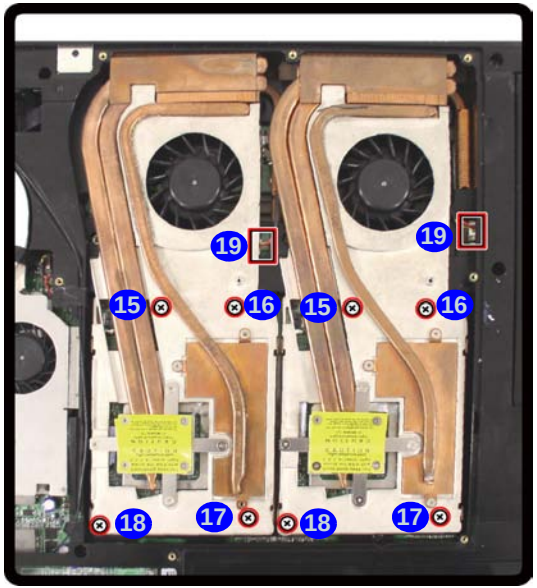
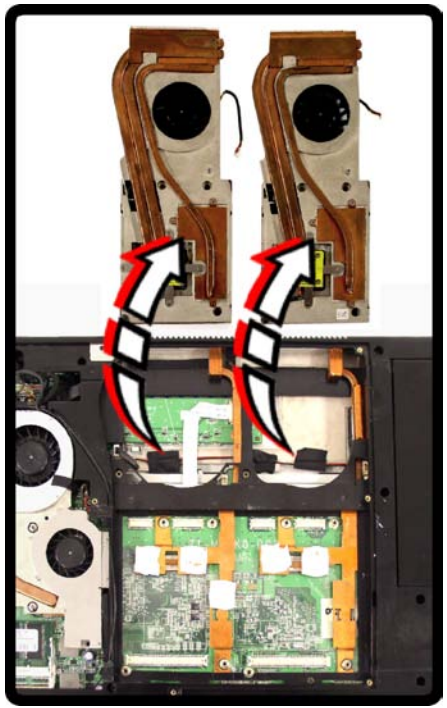


Figure 6 - 9
Bay Cover Removal

4. Remove screws (15 & 18).
5. Carefully (a cable is still connected) grip the plastic tag and lift the video card up.
6. Disconnect cable 19, and lift the video card off the computer.





Caution

The heat sink, and video card area in general, contains parts which are subject to high temperatures. Allow the area time to cool before removing these parts.

Figure 6 - 10
Video Card Removal

Chapter 7: Modules

Overview

This chapter contains the information on the various modules (some of which are **optional**) which may come with your computer, depending on the configuration purchased. If you are unsure please contact your service representative.

The chapter includes information on the following:

- Mini-PCI Wireless LAN Module
- Bluetooth Module
- Mini-PCI TV Tuner Module
- PC Camera Module

The Wireless LAN & Bluetooth Modules

If your purchase option includes a Wireless LAN and/or Bluetooth module, follow the information on the following pages for instructions on installing the driver(s). Pay careful attention to the warnings concerning the use of wireless modules aboard aircraft, and the instructions on enabling/disabling power to the module(s).

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are **OFF** if you are using the computer aboard aircraft.

Power Toggle for the Wireless LAN and Bluetooth Modules

You will need to enable power to the modules by using the following key combinations:

Fn + F11 = Wireless LAN Module Power Toggle
Bluetooth Ap-key = Bluetooth Module Power Toggle

When the **Wireless LAN** module is powered on, the LED will be **green**.

When the **Bluetooth** module is powered on, the LED will **be green**.

Do not try to use the Wireless LAN module and the Bluetooth module at the same time, as this may cause a **communication conflict**.

Mini-PCI Wireless LAN Module

Before installing the Wireless LAN driver, make sure that the WLAN module is on (the LED will be green).

Use the WLAN module key combination Fn + F11 to toggle power to the WLAN module. Make sure you install the drivers in the order indicated in ***Table 4 - 1, on page 4 - 6***.

You may have **one** of two (Intel or MSI) optional Mini-PCI Wireless LAN modules supplied with your computer; depending on your purchase configuration.You will be provided with the appropriate driver CD for your module. Insert the CD and follow the installation procedure.

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are **OFF** if you are using the computer aboard aircraft.

User Guide

You can view the User Guides by inserting the ***Intel PROSet/ Wireless CD-ROM*** and clicking **View User Guides** (button) as per **Figure 7 - 1**.

Intel WLAN Driver Installation

1. Make sure the module is powered on, and then insert the ***Intel PROSet/ Wireless CD-ROM*** into the CD/DVD drive.
2. Click **Install Software** (button).
3. Click the button to accept the license and click **Next > Next > OK.**
4. Click **OK** to complete the installation.
5. You can configure the settings by going to the **Intel (R) PROSet Wireless** control panel (**Start** > **Programs/All Programs** > **Intel PROSet Wireless**), or by double-clicking the taskbar icon .

Figure 7 - 1
Intel PROSet/ Wireless

MSI 6833B WLAN Driver Installation

1. Make sure the WLAN module is powered ON.
2. Insert the ***Wireless LAN CD-ROM*** into the CD/DVD drive.
3. The program will run automatically.
4. Click **Install Software** (button).
5. Click **Yes** to accept the license agreement.
6. Click **Next > Next**.
7. Click **Finish** to restart the computer.
8. The network settings can now be configured.
9. Double-click the WLAN icon in the taskbar to run the **RaLink Wireless Utility** (right-click the icon to bring up the utility menu).
10. Click **Rescan** to scan for available access points.
11. Select an access point and click **Connect** to start the access process (e.g. Authentication and Security).
12. You can access the **RaLink Wireless Utility** from the **Start** menu (**Start** menu and point to **Programs/All Programs > RaLink Wireless**).

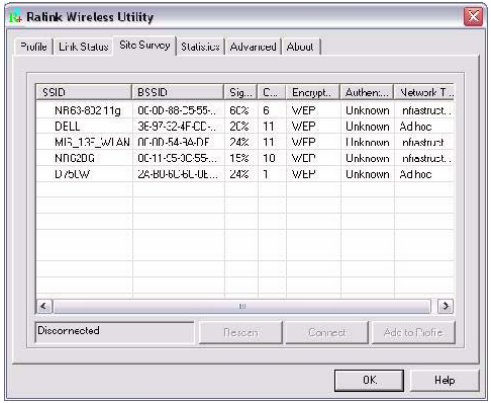
To view the **Help** menu, click **About** (tab) in the **RaLink Wireless Utility**. Click **Help** (button) to bring up the menu, and click **Contents** to access the links to help contents.

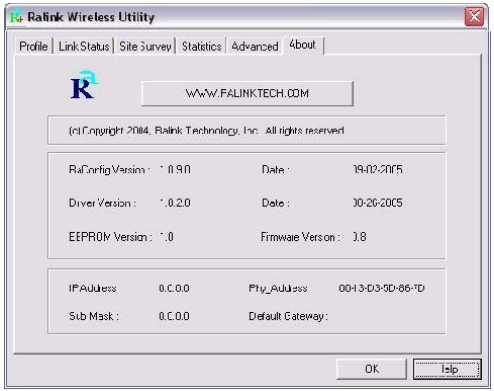
Figure 7 - 2
WLAN Utility

WLAN Icon

The WLAN icon will change color to reflect the network connection status:

- Signal Strength is Good
- Signal Strength is Normal
- Signal Strength is Weak
- Not Connected Yet
- Wireless Module Not Detected





Bluetooth Module

Before installing the **Bluetooth** driver, make sure that the optional Bluetooth module is on (the LED will be green). **Use the Ap-key to toggle power to the Bluetooth module**. Make sure you install the drivers in the order indicated in *Table 4 - 1, on page 4 - 6*.

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Bluetooth Driver Installation

1. Make sure the module is powered on, and then insert the ***Bluetooth CD-ROM*** into the CD/DVD drive.
2. The program will run automatically.
3. Choose the language you prefer, and click **OK**.
4. Click **Next**.
5. Click the button to accept the license agreement, and then click **Next**.
6. Click **Next > Next > Install**.
7. Click **Finish > Yes** to restart the computer.
8. The **IVT Corporation BlueSoleil - Main Window** screen appears on restart.
9. You can configure the settings at any time by going to the **IVT Corporation BlueSoleil - Main Window** control panel (**Start** > **Programs/All Programs** > **IVT BlueSoleil**), or by clicking the taskbar icon .

User Guide

View the BlueSoleil User Guides from the **Help** Menu (or press the **F1** key) in the **IVT Corporation BlueSoleil - Main Window** control panel. Click **BlueSoleil User Guides** in the **Contents** tab, and click to select the appropriate User Guide from the panel on the right.

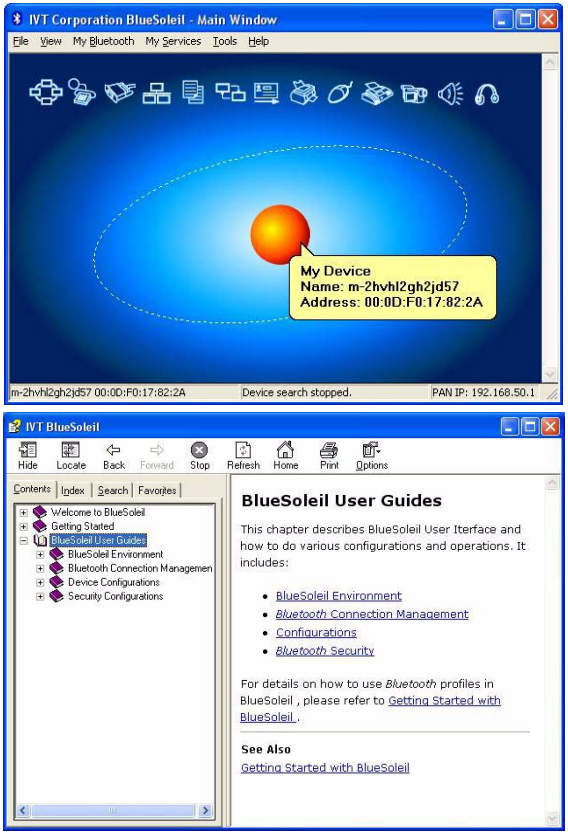

IVT Corporation BlueSoleil - Main Window
File View My Bluetooth My Services Tools Help
My Device
Name: m-2hvhl2gh2jd57
Address: 00:0D:F0:17:82:2A
m-2hvhl2gh2jd57 00:0D:F0:17:82:2A
Device search stopped.
PAN IP: 192.168.50.1
IVT BlueSoleil
Hide Locate Back Forward Stop Refresh Home Print Options
Contents Index Search Favorites
Welcome to BlueSoleil
Getting Started
BlueSoleil User Guides
BlueSoleil Environment
Bluetooth Connection Managemen
Device Configurations
Security Configurations
BlueSoleil User Guides
This chapter describes BlueSoleil User Iterface and how to do various configurations and operations. It includes:
BlueSoleil Environment
Bluetooth Connection Management
Configurations
Bluetooth Security
For details on how to use Bluetooth profiles in BlueSoleil , please refer to Getting Started with BlueSoleil .
See Also
Getting Started with BlueSoleil

Figure 7 - 3
Bluetooth Control Panel & User Guides

Mini-PCI TV Tuner Module

You may have **one** of two optional Mini-PCI TV Tuner modules supplied with your computer, depending on your purchase configuration. The optional TV Tuner allows you to watch TV, play music CDs, video conference and capture still images and video on your PC.

The **AverMedia M103 Hybrid** (for both analog and digital inputs) or **AverMedia M102** (for analog input only) **Mini-PCI TV Tuner Module** comes with a remote control unit and CDs containing the AverTV Utility software & Power DVD software.

The TV antenna jack and S-Video-In jack will only be enabled when the TV Tuner module is installed. Make sure you install any software before connecting the TV antenna.

TV Tuner Remote

Point the remote at the consumer **IR transceiver** to change channels etc.

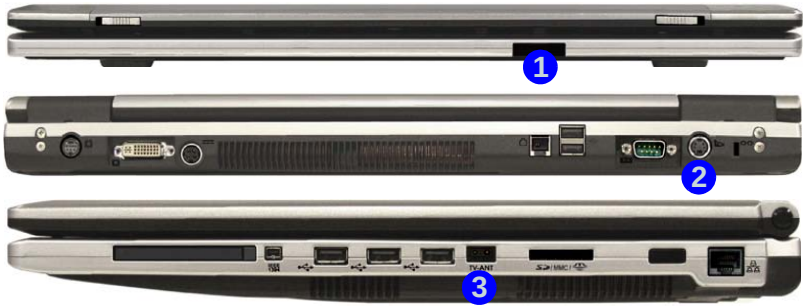


Figure 7 - 4
TV Tuner Ports

1. Consumer IR Transceiver
2. S-Video-In Jack
3. TV Antenna Jack

User Manual

Insert the ***TV Tuner CD-ROM*** and double-click **Acrobat Reader** (button) and follow the instructions to install the program (if you have not already done so). Double-click **User Manual** from the menu to access the manual.

TV Antenna

The TV antenna supplied with any TV Tuner module is intended for indoor use only. Please do not use your TV Tuner module outdoors.

AverMedia Mini-PCI TV Tuner Module

If your purchase includes either of the **AverMedia** Mini-PCI TV Tuners, then install the driver and software as per the instructions below.

Installing the AverTV Utility Software

1. Insert the ***AverTV Utility CD-ROM*** into the CD/DVD drive.
2. Click **TV Utility Software**.
3. Click **Yes** > **Next** > **Next** (click **Continue Anyway** if asked to continue at any time).
4. Click **Finish**.
5. Run the program from the **Start** > **Programs/All Programs** > **AVer TV** menu, and select the **AVer TV** program, or double-click the icon on the desktop.

Installing the Cyberlink Power DVD Software

1. Insert the ***Cyberlink PowerDVD CD-ROM*** into the CD/DVD drive.
2. Click **Next** > **Yes** > **Next** >..... **Next**.
3. Click **Finish**.
4. Run the program from the **Start** > **Programs/All Programs** > **CyberLink PowerDVD** menu, and select the **CyberLink PowerDVD** program, or double-click the icon on the desktop.
5. Type in the serial number and click **Activate**, then run the software again.
6. See over for instructions on configuring S/PDIF audio output.

Digital TV Broadcast Signal

The antenna is the most crucial factor in receiving a clear Digital Terrestrial TV broadcast signal. The **passive** antenna provided should provide a clear signal when placed beside a window. If the signal is not clear then you can purchase an **active** antenna (it should also be placed beside a window) to improve the signal. You should also check with any related government website which provides information on Digital Terrestrial TV coverage for your area. Note that (unlike standard analog TV) if the digital signal is weak then no picture will appear on the TV at all.

Setting S/PDIF for Audio Output in Cyberlink Power DVD.

If you want to use the S/PDIF-Out jack for audio output in the Cyberlink Power DVD application, then you should configure the application as follows:

1. Connect the speakers to the S/PDIF-Out Jack.
2. Run the Power DVD application
3. Right-click the screen, then scroll down and select the **Configuration** menu item.
4. Click **Audio** (tab).
5. Select **SPDIF** from the **Speaker Environment** menu.
6. Click **OK**.
7. The system is now set up to play the sound through the S/PDIF-Out Jack, however note that **audio output will only be played through the external speakers, and not the system speakers**.

PC Camera & TV Tuner

If you have the optional TV Tuner included in your purchase, make sure you install the TV Tuner driver and application first. After installing the PC Camera driver you will need to select which device to use with the **EMAMCAP** program. Go to the **Devices** menu in the **EMAMCAP** program and select the **USB2.0 1.3M PC CAM** device.

PC Camera Module

If your purchase includes the **optional** PC Camera you will need to install the device driver for it as indicated on the following pages (**make sure you install the drivers in the order indicated in** ***Table 4 - 1, on page 4 - 6***).

Latest PC Camera Driver Information

Check the PC Camera CD, and any accompanying insert pages, for the latest updated information on the PC Camera driver, which may override the information provided here.

PC Camera Driver Installation

1. Insert the ***PC Camera CD-ROM*** into the CD/DVD Drive.
2. The program will run automatically.
3. Click **Next** (click **Continue Anyway** if asked if you want to continue at any time).
4. Click **Finish** > **OK** to restart the computer.
5. Run the **emAMCAP** application software from the **USB2.0 1.3M PC CAM** item in the **Start** > **Programs/All Programs** menu (give the computer time to find the hardware).

PC Camera Audio Setup

If you wish to capture video & **audio** with your camera, it is necessary to setup the audio recording options in ***Windows***.

1. Go to the **Start** menu and point to **Settings** (or click **Control Panel**) and click **Control Panel**, then double-click the **Sounds & Audio Devices** icon (**Sounds, Speech, and Audio Devices** in Category View).
2. Click **Advanced** in **Device volume** (**Volume** tab).
3. Click **Options** and scroll down and click **Properties**.
4. Select **Realtek AC97 Audio** from the **Mixer Device** menu.
5. Click **Recording** (button).
6. Click **Microphone** (check box) if it is not checked, and then click **OK**.
7. Make sure the **Select** (check box) in the **Recording Control** panel, under the **Microphone** section, is checked (boost the volume as high as it will go).
8. Close the window, and then click **OK**.

Taking Still Pictures

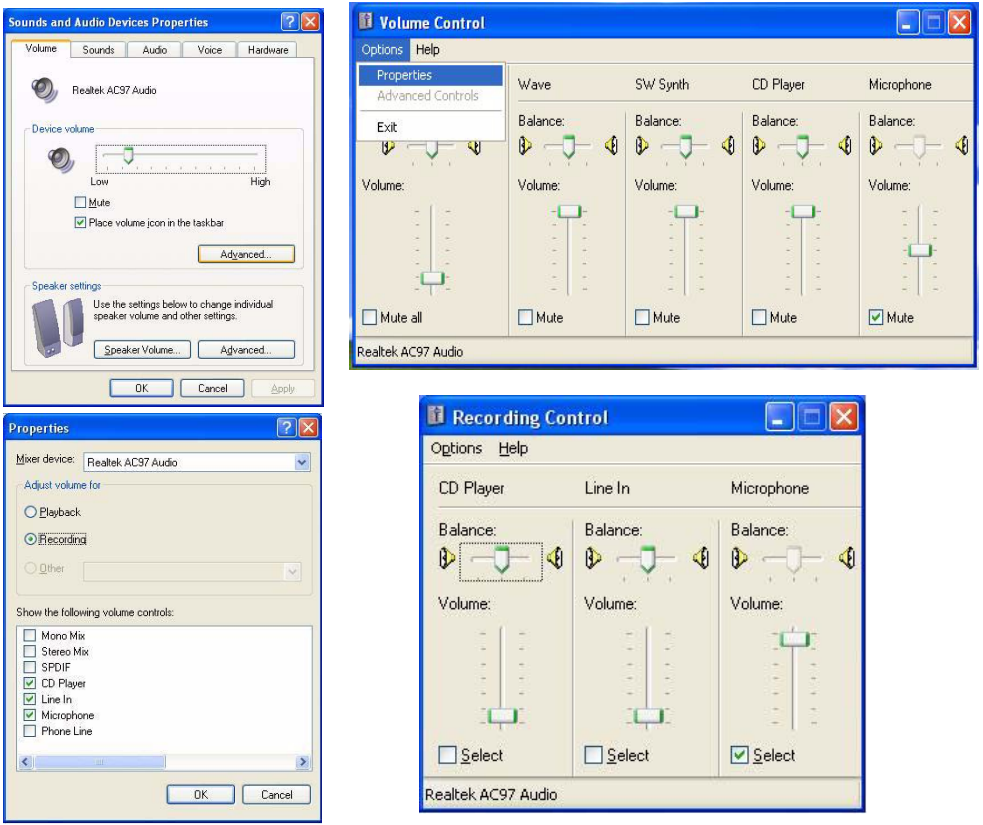
You may take still pictures in the ***Windows XP*** operating system **only**.

Double-click the **My Computer** icon on the desktop, or go the **Start** menu and point to **My Computer**, then click it.

Double-click the **USB2.0 1.3M PC CAM** icon.

Click **Take a new picture** in the **Camera Tasks** box.

Figure 7 - 5
Audio Setup



EMAMCAP

The **EMAMCAP** video viewer can capture video files to .avi format, and is useful for basic general purpose video viewing and testing (a number of commercially available programs support advanced video capture features).

1. Run the **EMAMCAP** program from the **Start > Programs/All Programs > USB2.0 1.3 PC Cam** menu (it is recommended that you **set the capture file** before the capture process - **see Set Capture File below**).
2. Go to the **Capture** menu heading and select **Start Capture**.
3. On the first run of the program (if you have not set the captured file) you will be asked to choose a file name, size (**see the sidebar - Pre-Allocating File Space**) and location for the captured file.
4. Click **OK** to start capturing the video, and press **Esc** to stop the capture.
5. If you wish to, you may go to the **File** menu and select **Save Captured Video...**, choose a file name and location, and then click **Open** (you can view the file using the **Windows Media Player**).

Set Capture File

In the **EMAMCAP** program you will only be asked to set the capture file name on the first run of the program. When you run the program the next time the file will automatically be overwritten with the newly captured file. To avoid overwriting files you can go to the **Set Capture File..** option in the **File** menu, and set the file name and location before capture. Set the name and location then click **Open** (you can choose **Cancel** to ignore the file size if prompted).

Pre-Allocating File Space

You may pre-allocate the file size for the capture file in the EMAMCAP program. You can choose to ignore this by clicking Cancel.

Pre-allocating space on the hard disk can improve the capture quality (particularly of large capture files), by reducing the amount of work the hard disk has to do in finding space for the video data as it is being captured.

You may find it helpful to defragment the HDD before capture.

Eliminating Screen Flicker

If you find that the video screen in the **EMAMCAP** program is flickering, you can try to adjust the setting in the **Lighting Selection** options.

1. Run the **EMAMCAP** program.
2. Go to **Options** and scroll down to select "**Video Capture Filter...**".
3. Click **Video Image** (tab).
4. Select **Florescent 50Hz**, **Florescent 60Hz** or **Incandescent** in the **Light** dropbox.

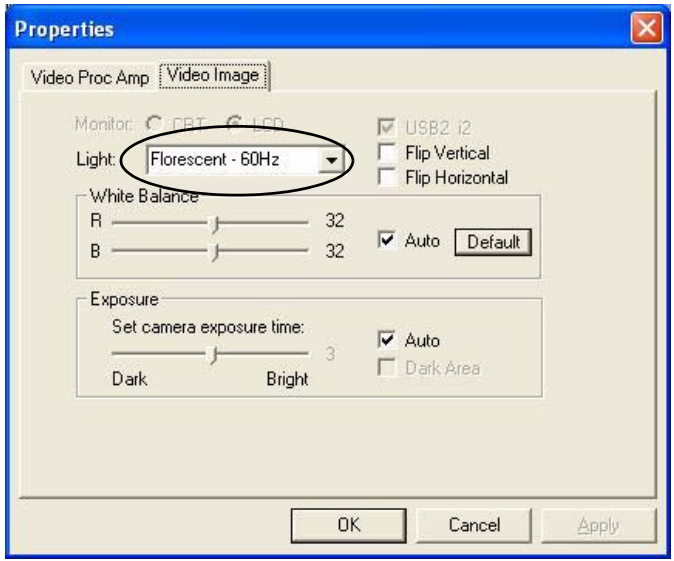


Figure 7 - 6
Video Image

Chapter 8: Troubleshooting

Overview

Should you have any problems with your computer, before consulting your service representative, you may want to try to solve the problem yourself. This chapter lists some common problems and their possible solutions. This can't anticipate every problem, but you should check here before you panic. If you don't find the answer in these pages, make sure you have followed the instructions carefully and observed the safety precautions in the preface. If all else fails, talk to your service representative. You should also make a record of what happened and what remedies you tried.

Of course, if something goes wrong, it will happen at the most inconvenient time possible, so you should preview this section just in case. If, after you've tried everything, and the system still won't cooperate, try turning it off for a few minutes and then rebooting. You will lose any unsaved data, but it may start working again. Then call your service representative.

Basic Hints and Tips

Many of the following may seem obvious but they are often the solution to a problem when your computer appears not to be working.

- **Power** - Is the computer actually plugged into a working electrical outlet? If plugged into a **power strip**, make sure it is actually working. Check the **LED Power Indicators** (see ***"LED Indicators" on page 1 - 6***) to see the computer's power status.
- **Connections** - Check all the **cables** to make sure that there are no **loose connections** anywhere.
- **Power Savings** - Make sure that the system is not in **Hibernate** or **Stand by** mode by pressing the keys configured in your *Power Management/Power Options* (see ***"Configuring the Power Button" on page 3 - 8***), the **Fn + F4** key combination, or power button to wake-up the system.
- **Brightness** - Check the brightness of the screen by pressing the **Fn** + **F8 and F9** keys to adjust the brightness (see ***Table 1 - 4, on page 1 - 8***).
- **Display Choice** - Press **Fn** + **F7** to make sure the system is not set to "external only" display (see ***Table 1 - 4, on page 1 - 8***).
- **Boot Drive** - Make sure there are no **floppy disks** in any connected drive when you start up your machine (this is a common cause of the message "***Invalid system disk - Replace the disk, and then press any key***" / "***Remove disks or other media. Press any key to restart***").

Backup and General Maintenance

- Always **backup** your important data, and keep copies of your OS and programs safe, but close to hand. Don't forget to note the **serial numbers** if you are storing them out of their original cases, e.g. in a CD wallet.

- Run **maintenance programs** on your hard disk and OS as often as you can. You may schedule these programs to run at times when you are not using your computer. You can use those that are provided free with your OS, or buy the more powerful dedicated programs to do so.

- Write down your passwords and keep them safe (away from your computer). This is especially important if you choose to use a **Boot** password for the SCU (see *"Security Menu" on page 5 - 10*).

- Keep copies of vital **settings files** such as network, dialup settings, mail settings etc. (even if just brief notes).

Warranty

The CPU is not a user serviceable part. Opening this compartment, or accessing the CPU in any way, may violate your warranty.

Viruses

- Install an **Anti-Virus** program and keep the **definitions file** (the file which tells your program which viruses to look for) up to date. New computer viruses are discovered daily, and some of them may seriously harm your computer and cause you to lose data. **Anti-Virus** programs are commercially available and the **definitions file updates** are usually downloadable directly from the internet.

- Be careful when opening e-mail from sources you don't know. **Viruses** are often triggered from within **e-mail attachments** so take care when opening any attached file. You can configure most **Anti-Virus** programs to check all **e-mail attachments**. **Note**: You should also beware of files from people you know as the virus may have infected an **address book** and been automatically forwarded without the person's knowledge.

- Keep a "**Boot Floppy Disk**" or "**Bootable CD-ROM**" (this disk provides basic information which allows you to startup your computer) handy. You may refer to your OS's documentation for instructions on how to make one, and many **Anti-Virus** programs will also provide such a disk (or at least instructions on how to make one).

Upgrading and Adding New Hardware/Software

- Do not be tempted to make changes to your **Windows Registry** unless you are very sure of what you are doing, otherwise you will risk severely damaging your system.

- Don't open your computer or undertake any repair or upgrade work if you are not comfortable with what you are doing.

- Read the **documentation**. We can assume, since you are reading this that you are looking at the computer's manual, but what about any new peripheral devices you have just purchased? Many problems are caused by the installation of new hardware and/or software. Always refer to the documentation of any new hardware and/or software, and pay particular attention to files entitled "**READ ME**" or "**READ ME FIRST**".

- When installing a new device always make sure the device is powered on, and in many cases you will need to restart the computer. Always check that all the cables are correctly connected.

- Make sure you have installed the **drivers** for any new hardware you have installed (latest **driver files** are usually available to download from vendor's websites).

- Thoroughly check any **recent changes** you made to your system as these changes may affect one or more system components, or software programs. If possible, go back and undo the change you just made and see if the problem still occurs.

- Don’t over complicate things. The less you have to deal with then the easier the source of the problem may be found; **Example** - if your computer has many devices plugged into its ports, and a number of programs running, then it will be difficult to determine the cause of a problem. Try disconnecting all of the devices and restarting the computer with all the peripheral devices unplugged. A process of elimination (adding and removing devices and restarting where necessary) will often find the source of a problem, although this may be time consuming.

Problems & Possible Solutions

Problem	Possible Cause - Solution
You turned the **power on** but it doesn't work.	*Battery missing / incorrectly installed.* Check the battery bay, make sure the battery is present and seated properly (the design of the battery only allows it to go in one way). Make sure there's nothing interfering with the battery contacts.
The **Battery LED power** indicator , is blinking orange.	*Low Battery.* Plug in the AC power source. If the computer doesn't start up immediately, turn it off then on again.
You are losing **battery power** too quickly.	*The system is using too much power.* If your *OS* has a *Power Options* scheme (see ***"Power Schemes" on page 3 - 4***) check its settings. You may also be using a PC Card device that is drawing a lot of power.
Actual **battery operating time** is shorter than expected.	*The battery has not been fully discharged before being recharged.* Make sure the battery is fully discharged and recharge it completely before reusing (see ***"Battery Information" on page 3 - 9***). *Power Options have been disabled.* Go to the **Control Panel** in *Windows* and re-enable the options. *A peripheral device or PC Card is consuming a lot of power.* Turn off the unused device to save power.

Problem	Possible Cause - Solution
The **computer feels too hot**.	Make sure the computer is properly ventilated and the vents/fan intakes are not blocked. If this doesn't cool it down, put the system into **Hibernate** mode or turn it off for an hour. Make sure the computer isn't sitting on a thermal surface (see ***"Overheating" on page 1 - 9***). Make sure you're using the correct adapter. Make sure that your notebook is completely powered off before putting it into a travel bag (or any such container). Putting a notebook which is powered on in a travel bag may cause the vents/fan intakes to be blocked.
Nothing appears on screen.	*The system is in a power saving mode*. Toggle the sleep/resume key combination, **Fn + F4** (see ***"Sleep Button" on page 3 - 8***). *The screen controls need to be adjusted.* Toggle the screen control **Fn + F8/F9** key combinations (see ***Table 1 - 4, on page 1 - 8***). If you're connected to an external monitor, make sure it's plugged in and turned on. You should also check the monitor's own brightness and contrast controls. *The computer is set for a different display.* Toggle the screen display key **Fn + F7** combination (see ***Table 1 - 4, on page 1 - 8***). If an external monitor is connected, turn it on. *The **screen saver** is activated.* Press any key or touch the **TouchPad**.
No image appears on the **external monitor** I have plugged in and powered on.	*You haven't installed the video driver and configured it appropriately from the **Control Panel**.* See ***"What to Install" on page 4 - 1*** for instructions on installing the driver, and see ***"NVIDIA Video Driver Controls" on page B - 1*** for instructions on configuring the video driver.

Problem	Possible Cause - Solution
You forget the **boot password**.	*If you forget the password, you may have to discharge the battery of the CMOS.* Contact your service representative for help.
 Password Warning If you choose to set a boot password, **NEVER** forget your password. The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.	
The **sound** cannot be heard or the volume is very low.	*The volume might be set too low.* Check the volume control in the ***Volume Control Panel*** in the *Windows* taskbar, or use the key combination **Fn + F5** and **F6** (see ***"Audio Features" on page 2 - 11***) to adjust.
The **compact disc** cannot be read.	*The compact disc is dirty.* Clean it with a CD-ROM cleaner kit.
The **compact disc tray** will not open when there is a disc in the tray.	*The compact disc is not correctly placed in the tray.* Gently try to remove the disc using the eject hole (see ***"Loading Discs" on page 2 - 3***).
The **DVD regional codes** can no longer be changed.	*The code has been changed the maximum **5** times.* See ***"DVD Regional Codes" on page 2 - 5***.

Problem	Possible Cause - Solution
Unwelcome numbers appear when typing.	*If the LED* *is lit, then Num Lock is turned* ***ON*** (see ***"LED Indicators" on page 1 - 6***).

Other Keyboards

If your keyboard is damaged or you just want to make a change, you can use any standard USB keyboard. The system will detect and enable it automatically. However special functions/hot keys unique to the system's regular keyboard may not work.

The **TouchPad** doesn't work.	*The Touchpad has been disabled*. Press the Touchpad toggle (**Fn + F1**) key combination (make sure you have installed the Touchpad driver.
The **system freezes** or the screen goes dark.	*The system's power saving features have timed-out*. Use the AC/DC adapter, press a key on the keyboard, or press the sleep (**Fn + F4**) key combination, or press the power button if no LEDs are lit.
The system never goes into a **power saving mode**.	Power Options features are not enabled. Go to the ***Windows*** Power Options menu and enable the features you prefer (see ***"System Power Options" on page 3 - 6***). Make sure you have enabled **Hibernate** mode from the control panel.

Problem	Possible Cause - Solution
The **Wireless LAN/ Bluetooth/PC Camera modules** cannot be **detected**.	*The modules are off.* Check the appropriate LED indicator to see if the modules are on or off (see ***"LED Indicators" on page 1 - 6***). If the LED indicator is off, then press the appropriate AP-Key button/function key combination in order to enable the modules (see ***Table 1 - 3, on page 1 - 7***/***Table 1 - 4, on page 1 - 8***).
The **Wireless LAN/ Bluetooth/PC Camera modules** cannot be **configured**.	*The driver(s) for the module(s) have not been installed*. Make sure you have installed the driver for the appropriate module (see the instructions in ***Chapter 7 "Modules"*** for the appropriate module).
The **PC Camera software** displays a black screen when the **EMAMCAP** software is run.	*The software is using the incorrect device*. If you have both the optional PC Camera and TV Tuner modules present, make sure you install the TV Tuner driver and application first. After installing the PC Camera driver you will need to select which device to use with the **EMAMCAP** program. Go to the **Devices** menu in the **EMAMCAP** program and select the **USB2.0 1.3M PC CAM** device. (see ***"PC Camera & TV Tuner" on page 7 - 12***).

Appendix A: Interface (Ports & Jacks)

Overview

The following chapter will give a quick description of the ports & jacks which allow your computer to communicate with external devices, connect to the internet etc.

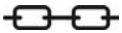
Ports and Jacks

Item	Description
Built-In Microphone	The built-in microphone allows you to record on your computer
Card Reader	The card reader allows you to use the following digital storage cards: MMC (MultiMedia Card) SD (Secure Digital) MS (Memory Stick) MS Pro (Memory Stick Pro)
Consumer Infrared Transceiver	The **consumer infrared** transceiver at the **front** of the computer allows the computer to communicate with the remote control unit supplied with the **optional** Mini-PCI TV Tuner (see ***"System Map: Front & Rear Views" on page 1 - 9***).
DC-In Jack	Plug the supplied AC/DC adapter into this jack to power your computer.
DVI-Out Port	The DVI-Out (Digital Visual Interface) Port allows you to connect an external monitor, or Flat Panel Display, to allow dual video or simultaneous display on the LCD and external monitor/FPD (see ***"Display Devices & Options" on page 1 - 14***). If you are using an older type of monitor you will need to use a converter to convert the signal from DVI to VGA.

Item	Description
Headphone-Out Jack	Headphones or speakers may be connected through this jack. **Note**: Set your system's volume to a reduced level before connecting to this jack.
Infrared (FIR) Transceiver	The **FIR** (far infrared) transceiver on the **right** of the computer allows the computer to communicate with similarly equipped devices (see ***"Configuring the Infrared Settings for FIR" on page 2 - 12***).
Line-In Jack	The Line-In jack allows you to play audio sources through the computer's speakers. Note that audio input through Line-in will default to the **mute** setting by default. To set up your audio sources to play though the Line-in jack go to the **Sounds and Audio Devices** **Windows control panel** and make sure the Mute box is not ticked.
Microphone-In Jack	Plug an external microphone in to this jack to record on your computer.
Mini-IEEE 1394a Ports	This allows high-speed connection to various peripheral devices, e.g. external disk drives and digital cameras (**see note below**). **IEEE 1394** The Mini-IEEE 1394a ports only support **SELF POWERED** IEEE 1394 devices.

A

Interface (Ports & Jacks)

Item	Description
RJ-11 Phone Jack	This port connects to the built-in modem. You may plug the telephone line directly into this RJ-11 telephone connection. **Note**: Broadband (e.g. ADSL) modems usually connect to the LAN port.
RJ-45 LAN Jack	This port supports LAN (Network) functions. **Note**: Broadband (e.g. ADSL) modems usually connect to the LAN port.
S/PDIF-Out Jack	This S/PDIF (Sony/Philips Digital Interface Format) Out Port allows you to connect your DVD-capable PC to a Dolby AC-3 compatible receiver for “5.1” or ‘dts’ surround sound.
Security Lock Slot 	To prevent possible theft, a Kensington-type lock can be attached to this slot. Locks can be purchased at any computer store.
Serial Port	Connect a serial type mouse to this port.
S-Video-In Jack	The S-Video-In jack allows video input to the computer if you have included the **optional** Mini-PCI TV Tuner in your purchase.
7-Pin S-Video-Out Jack	Connect your television to your computer and view DVDs, VCDs or anything else your computer can display. You will need a 7-pin S-Video plug to 4-pin S-Video jack adapter and S-Video cable to make the connection (see ***“7-Pin S-Video-Out Jack” on page 1 - 9***).

Item	Description
TV Antenna Jack	Use this jack to connect the TV antenna if you have included the **optional** Mini-PCI TV Tuner in your purchase.
USB 2.0/1.1 Ports	These USB 2.0 compatible ports (USB 2.0 is fully USB 1.1 compliant) are for low-speed peripherals such as keyboards, mice or scanners, and for high-speed peripherals such as external HDDs, digital video cameras or high-speed scanners etc. Devices can be plugged into the computer, and unplugged from the computer, without the need to turn the system off (if the power rating of your USB device is 500mA or above, make sure you use the power supply which comes with the device).

Appendix B: NVIDIA Video Driver Controls

The basic settings for configuring the LCD are outlined in *"Video Features" on page 1 - 14*.

NVIDIA Video Driver Installation

Make sure you install the drivers in the order indicated in *Table 4 - 1, on page 4 - 6*.

1. Double-click **VGA**.
   OR
   Click **Start** (menu) > **Run...** and navigate (**Browse..**) to **D:\Drivers\01VGA\setup.exe** and click **OK**.
2. Click **Next** (click **Continue Anyway** if asked if you want to continue at any time).
3. Click **Finish** to restart the computer.

Video Card Options

Note that card types, specifications and drivers are subject to continual updates and changes. Check with your service center for the latest details on video cards supported.

3D Ap-Key Button

The system will default to high performance video when powered by the AC/DC adapter (the 3D Ap-Key button will be illuminated in blue when in high performance video mode).

If you switch from AC power to battery power the system will automatically change to a lower performance video mode setting (the 3D Ap-Key button will no longer be illuminated in blue). **High Performance Video can not be enabled when the system is battery powered**.

Figure B - 1
3D Ap-Key Button

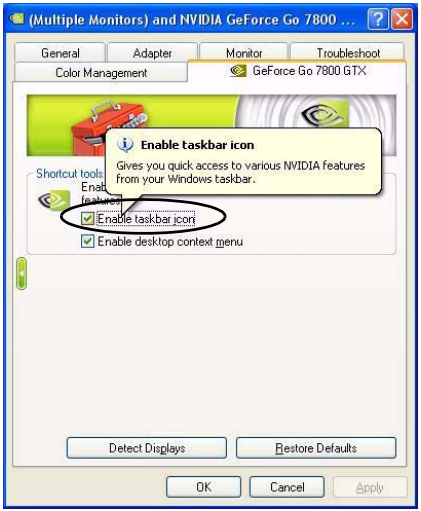
The system will retain in memory the last known video performance setting if you switch back from battery to AC power.

1. 3D Ap-Key Button

NVIDIA Display Properties

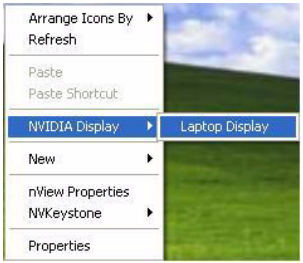
More advanced video configuration options are provided in the **NVIDIA Display Properties control panel** tab.

1. Open the **Display Properties** (see page *1 - 14*) control panel.
2. Click **Advanced** (button).
3. Click **GeForce Go....** (tab).
4. Click **Additional Properties** (or click the icon) to make any video adjustments.



GeForce Go... Control Panel

To access the **GeForce Go... control panel from the desktop;** right-click the **desktop**, then point to **NVIDIA Display** and click **Laptop Display**.



Taskbar Icon

Click the NVIDIA taskbar icon then click **NVIDIA Display > Laptop Display** to bring up the **GeForce Go...** control panel.

If you cannot see the tray icon , go to the **GeForce Go...** control panel tab and select the **Tools** item from the **Additional Properties** menu. Click the tickbox "**Enable taskbar icon**", and apply the settings.

Figure B - 2
Enable Taskbar Icon

B

Additional Properties

The items listed in the **Additional Properties** window allow you to configure your display(s). If the items do not display you can either click the **Additional Properties** button, or click the icon .

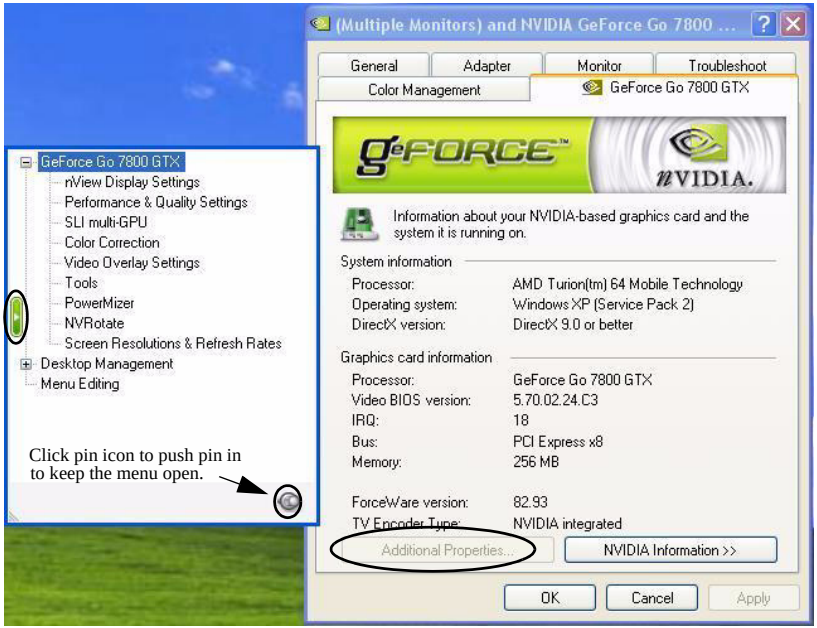


Figure B - 3
Additional Properties

Some screen examples are shown on the following page.

You may make changes to the Display Settings, Color Correction, Video Overlay, Resolutions, Refresh Rates and Screen Rotation by clicking the appropriate tab and adjusting the setting.

Right-click on a control panel item to bring up a Help menu (see sidebar).

Help Menus

Right-click on many of the items in the tabs to bring up the "What's This?" button.

Click the "What's This?" button to bring up the help menu.

Figure B - 4
Screen Examples

nView Desktop Manger from Additional Properties

You can view the nView Desktop Manager control panels from the Additional Properties window.

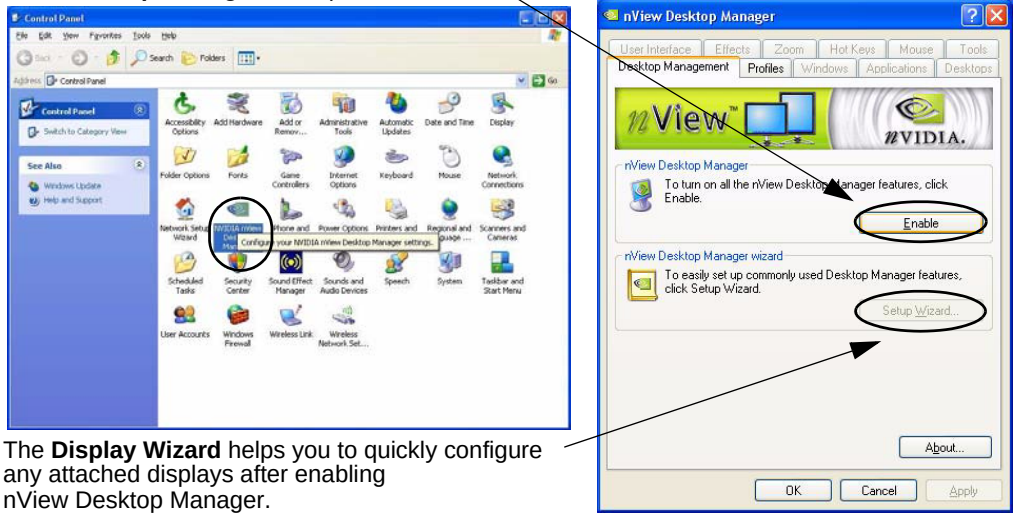
Select **Additional Properties** from the **GeForce Go...** control panel. Click the **Desktop Management** menu item and click the **Enable** button to display the options.

NVIDIA nView Desktop Manager

The **nView Desktop Manager** allows quick access to control panels for features such as Desktop Management, Profiles, Hot Keys etc. The Control panel may be accessed as follows.

1. Click **Start**, point to **Settings** and click **Control Panel** (or just click **Control Panel**).
2. Double-click **NVIDIA nView Desktop Manager** (icon) - Click "**Switch to Classic View"** from the left of the menu if you are in **Category View**.

Click the **Enable** button to display the **Desktop Management** options menu.



The **Display Wizard** helps you to quickly configure any attached displays after enabling nView Desktop Manager.

Figure B - 5

Desktop Manager Control Panel

B

Additional configuration controls and tools are available from the nView Desktop Manager.

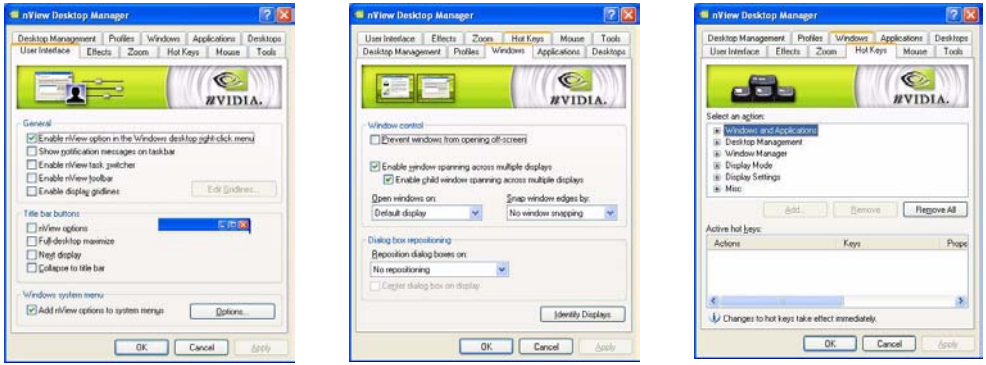


Figure B - 6
nView Desktop Manager Screen Examples

B

Multi-GPU Display Mode Support

SLI Multi-GPU supports only **single** display mode (disable SLI Multi-GPU before switching to Clone or Dualview modes).

SLI Multi GPU

This computer features an **NVIDIA Scalable Link Interface (SLI)** that improves graphic quality and performance by combining **dual** NVIDIA GPUs in a single system. SLI Multi GPU needs to be enabled/disabled from the SLI multi-GPU menu item.

1. Go to **Additional Properties** in the **GeForce Go...** control panel tab (see page ***B - 3***).
2. Select **SLI multi-GPU**.
3. Click the box to enable/disable SLI multi-GPU and click **Apply** or **OK**.

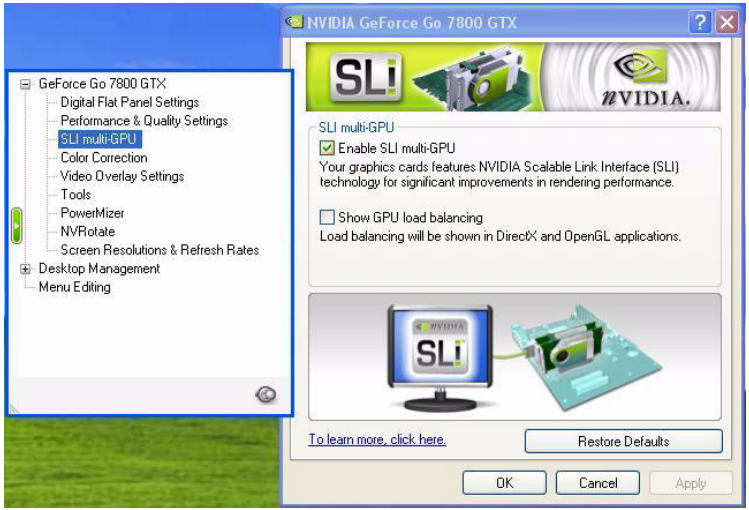


Figure B - 7
SLI multi-GPU Control Panel

B

Display Devices

Besides the built-in LCD, you can also use an external monitor/flat panel display or TV as your display device. The following are the display options:

1. The built-in LCD.
2. An external monitor connected to the DVI-Out Port (may require DVI to VGA converter).
3. A flat panel display connected to the DVI-Out Port (may require DVI to VGA converter).
4. A TV connected to the S-Video-Out jack.

Monitor and TV Tuner

If you are connecting both a monitor/flat panel display to the DVI-Out Port, and a cable/aerial to the optional TV Tuner module, **make sure you attach the cable/aerial to the TV Tuner first**, then the monitor.

Display Wizard

Use the **Display Wizard** in the **Desktop Management** window to quickly setup and configure any attached displays (see **Figure B - B - 5** on page *B - 6*).

Multi-GPU Display Mode Support

SLI Multi-GPU supports only **single** display mode (disable SLI Multi-GPU before switching to Clone or Dualview modes).

Function Key Combination

You can use the **Fn + F7** key combination to toggle through some display options:

- Notebook Only
- External Display Only

Make sure you give the displays enough time to refresh.

Figure B - 8
nView Display Settings

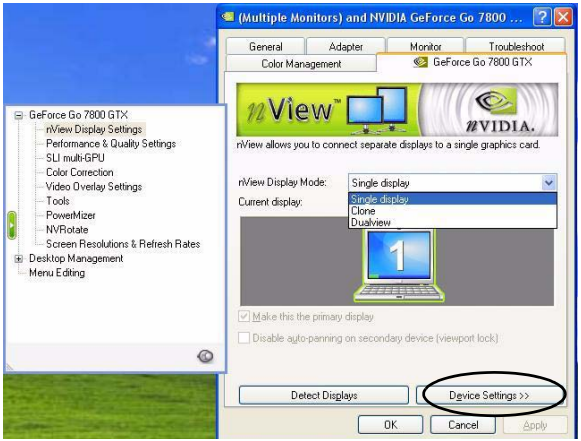
Attaching Other Displays

If you prefer to use a monitor or flat panel display, connect it to the DVI-Out Port at the rear of the computer.

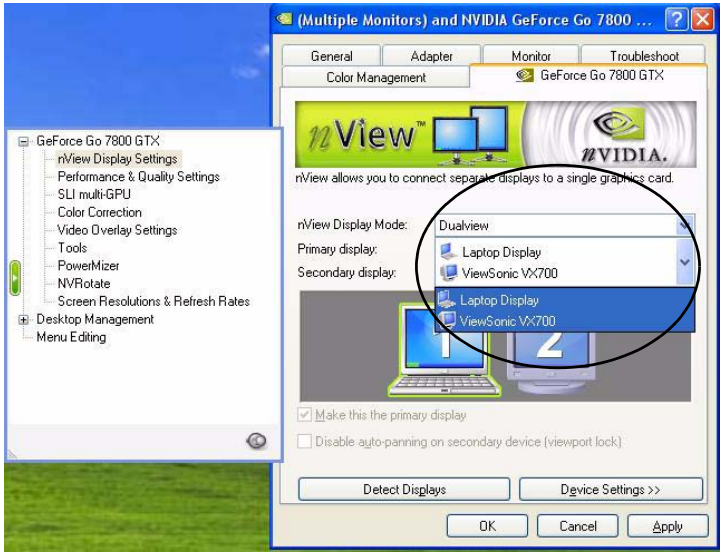
1. Attach your external monitor to the DVI-Out Port (or TV to the S-Video-Out jack), and turn it on.
2. Go to **Additional Properties** in the **GeForce Go... Properties** control panel tab (see *"NVIDIA Display Properties" on page B - 3*).
3. Select **nView Display Settings** (if the nView Display Settings does not appear, close and reopen the control panel).
4. Select the display mode from the **nView Display Mode** drop box (see page *B - 12*).
5. Select **Apply** and click **Yes** to confirm the settings.

Device Settings

Click the display icon to select it, then click the **Device Settings** button to make any adjustments for the selected display (including **Screen Resolutions & Refresh Rates**).



6. Select the display option from the **Primary Display/ Secondary Display** dropbox. If you have a TV and external monitor/flat panel display attached you will have a number of available options (see sidebar). Select and **Apply** the appropriate option.



7. Click the monitor icon to select it, and then click the **Device Settings** button to make any adjustments for the selected display (including **Screen Resolutions & Refresh Rates**).
8. Click **Apply** to confirm any setting changes.

nView Display Mode Options

The display options listed under the **Primary/Secondary display** drop boxes will differ according to the displays attached, and the **Display Mode** chosen.

Click **Detect Displays** (button) to automatically update the attached display information.

Figure B - 9
Primary/ Secondary Display Dropbox

Display Wizard

Use the **Display Wizard** in the **Desktop Management** window to quickly setup and configure any attached displays (see **Figure B - B - 5** on page *B - 6*).

Multi-GPU Display Mode Support

SLI Multi-GPU supports only **single** display mode (disable SLI Multi-GPU before switching to Clone or Dualview modes).

Display Modes

Single Display Mode

Only one of your displays is used.

Clone Mode

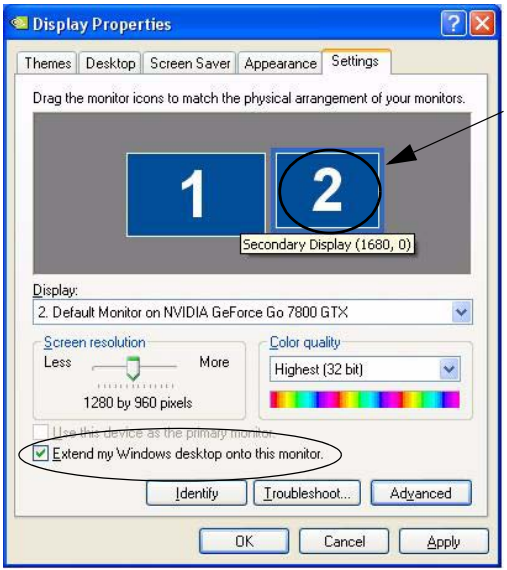
Clone Mode simply shows an exact copy of the Primary display desktop on the other display(s). This mode will drive multiple displays with the same content and each display device can be configured independently.

Dualview Mode

Dualview Mode treats both connected displays as separate devices, and they act as a virtual desktop resulting in a large workspace. When Dualview is enabled, you can drag any icons or windows across to the other display desktop. It is therefore possible to have one program visible in one of the displays, and a different program visible in the other display.

To Enable Extended Desktop (Windows Display Properties)

1. Attach your external monitor to the external monitor port and turn it on.
2. Click **Start**, point to **Settings** (or click **Control Panel**) and click **Control Panel** (if you are in **Category View** choose **Appearance and Themes**).
3. Double-click **Display** (icon).
4. Click **Settings** (tab).
5. Click the monitor icon (e.g. 3), and make sure you have checked "**Extend my Windows desktop onto this monitor**." and click **Apply**.



Click the appropriate monitor icon (e.g. 3) to be able to select the option to extend the desktop on to it.

In this example the Primary monitor 1 is on the left, the secondary display 3 is on the right.

Display Settings Extended Desktop

Use the control panel to drag the monitors to match the physical arrangement you wish to use.

You can drag any icons or windows across to either display desktop, which makes it possible to have one program visible in one of the displays, and a different program visible in the other display.

Figure B - 10
Display Properties (Extended Desktop)

B

Detect Displays

To get a full range of options from the **Device Settings** menu click the **Detect Displays** button. Click to select the TV icon, then click the **Device Settings** button.

Enabling TV Display

To display desktop images on a TV, connect the TV to your computer by using an S-Video cable from the TV to the S-Video-Out jack at the rear of the computer (.

You will need to enable the TV display from the **nView Display Settings** tab (see *"Attaching Other Displays" on page B - 10*). The TV will appear as a display option (select the display option from the **Primary Display/ Secondary Display** dropbox) when attached to the S-Video-Out jack.

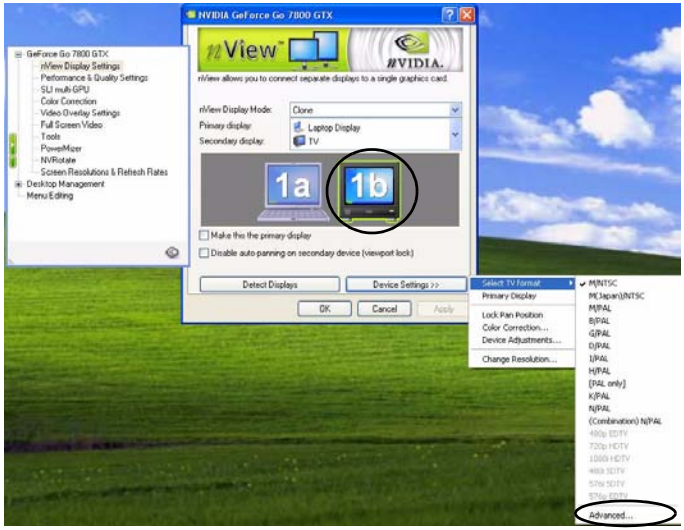


Figure B - 11
TV Device Settings

Click the TV display icon to select it and set the **TV format** from the **Select TV Format menu**. The **Advanced** option at the bottom of the **Select TV Format** menu allows you to select TV format by country if you are unsure of your TV format.

Device Adjustments (**Device Settings** menu) allows you to make changes to the **TV output**.

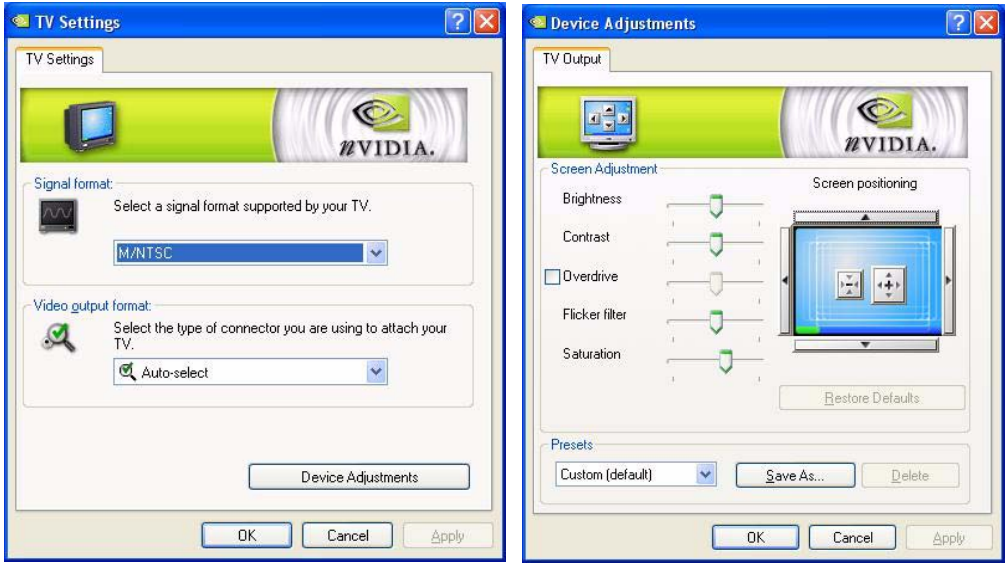


Figure B - 12
TV Settings & TV Output

Appendix C: Specifications

Latest Specification Information

The specifications listed in this Appendix are correct at the time of going to press. Certain items (particularly processor types/ speeds and CD/DVD device types) may be changed or updated due to the manufacturer's release schedule. Check with your service center for details.

Feature	Specification	
Processor Types	Mobile AMD Turion™ 64 Processor (35W), 754-pin Micro-PGA Package Models **ML-28/ ML-32**	(μ0.09) 0.09 Micron Silicon-On-Insulator (SOI) Process Technology, 512KB L2 Cache 1.6GHz/ 1.8GHz
	Mobile AMD Turion™ 64 Processor (35W), 754-pin Micro-PGA Package Models **ML-30/ ML-34/ ML-37/ ML-40/ ML-42/ ML-44**	(μ0.09) 0.09 Micron Silicon-On-Insulator (SOI) Process Technology, 1MB L2 Cache 1.6GHz/ 1.8GHz/ 2.0GHz/ 2.2/ 2.4GHz
	Mobile AMD Turion™ 64 Processor (25W), 754-pin Micro-PGA Package Models **MT-28/ MT-32**	(μ0.09) 0.09 Micron Silicon-On-Insulator (SOI) Process Technology, 512KB L2 Cache 1.6GHz/ 1.8GHz
	Mobile AMD Turion™ 64 Processor (25W), 754-pin Micro-PGA Package Models **MT-30/ MT-34/ MT-37/ MT-40**	(μ0.09) 0.09 Micron Silicon-On-Insulator (SOI) Process Technology, 1MB L2 Cache 1.6GHz/ 1.8GHz/ 2.0GHz/ 2.2GHz
Core Logic	nVIDIA nForce4 SLI Chipset	
LCD	19" WSXGA+ (1680 * 1050) TFT LCD	
Security	Security (Kensington® Type) Lock Slot	BIOS Password
Memory	Two 64-bit wide **DDR** Data Channels Two 200 Pin DDR SODIMM Sockets Supporting **DDR 400/333 MHz** Expandable up to **2GB** (Compatible with 1024MB, 512MB, 256MB **DDR 400/333 MHz** Modules)	
BIOS	One 512KB Flash ROM	Phoenix BIOS

Feature	Specification
Video Card Options	**NVIDIA GeForce Go 7800 GTX** **Dual/Single NVIDIA G70-GTX** High Performance Graphic Chip **512MB (Dual VGA)** or **256MB (Single VGA)** **DDR-III (DDR3**) Video RAM On Board 256 bit Memory Interface PCI Express * 8 by 2 Fully DirectX® 9 Support, SM 3.0 (NVIDIA Only) Modular Design **Video Card Options** Note that card types, specifications and drivers are subject to continual updates and changes. Check with your service center for the latest details on video cards supported.
Storage Options	One Changeable Primary 2.5" 9.5mm (h) **Serial-ATA II (SATA II)** Hard Disk Drive One Changeable Primary Optical Device Bay - 12.7 mm (h) for Optical CD/DVD Device Drive Options (see***"Optional" on page C - 5***)
Card Reader	Built-In 4-in-1 Card Reader (SD/ MMC/ MS/ MS Pro)
Audio	SRS **WOW** Surround Sound Technology Inside 3D Enhanced Sound System Sound Blaster PRO™ Compatible Virtual 4-Channel Sound System S/PDIF Digital Output (5.1 CH) Built-In Microphone 4 * Built-In Speakers Built-In Sub Woofer
Keyboard & Pointing Device	Full Size Winkey Keyboard with Numeric Keypad Built-In TouchPad (Scroll Functionality Included)

C

Feature	Specification	
PCMCIA	One Type II PCMCIA 3.3V/5V Socket	
I/O Ports	Five USB 2.0 Ports One Mini-IEEE1394a Port Two Mini-PCI Ports One Serial Port One Infrared Transceiver (IrDA 1.1 / FIR) One DVI-Out Port One Headphone/Speaker-Out Jack One Microphone-In Jack One S/PDIF Out Jack One Line-In Jack for Audio Input	One RJ-11 Jack (Modem) One RJ-45 Giga LAN (Local Area Network) Jack One DC-In Jack One 7-Pin S-Video-Out Jack for TV & HDTV Output (requires adapter) One TV Antenna (Analog/Digital) Jack (Functions with **Optional** TV Tuner Module) One Consumer Infrared Transceiver (Functions with **Optional** TV Tuner Module) One S-Video-In Jack for Video Input (Functions with **Optional** TV Tuner Module)
Communication	Infrared Transceiver Infrared Transfer 1cm ~ 1M Operating Distance 115.2K bps SIR 4M bps FIR IrDA 1.1 Compliant 10/100/1000 BASE-TX Fast Ethernet LAN on board (PCIe Interface) Integrated 56K AC'97 Modem (V.92 Compliant)	802.11 a/b/g Mini-PCI Wireless LAN Module Bluetooth™ Class II V1.2 Mini-PCI interface Module 1.3M Pixel Video Camera Module (**Optional**) Mini-PCI TV Tuner Module (**Optional**)

Feature	Specification	
Operating Systems Supported	Windows XP SP2	
Power Management	Supports ACPI 2.0	Supports Hibernate/Stand by Modes
Power	Full Range AC/DC Adapter – AC in 100 ~ 240V, 47 ~ 63Hz DC Output 20V, 11 A (220 Watts) Easy Changeable 12-Cell Smart Lithium-Ion 6600mAH / 14.8V Main Battery	
Environmental Spec	**Temperature** Operating: 5°C ~ 35°C Non-Operating: -20°C ~ 60°C	**Relative Humidity** Operating: 20% ~ 80% Non-Operating: 10% ~ 90%
Physical Dimensions & Weight	476mm (w) * 343mm (d) * 29.5 ~ 47.8mm (h)	6.6kg with 12-Cell Battery
Optional	**Optical Drive Module Options:** DVD/CD-RW Combo Drive Module DVD-Dual Drive Module DVD-Super Multi Drive Module	TV Tuner Module with Mini-PCI Interface (either analog only **OR** analog/digital options) 1.3M Pixel USB 2.0 Video Camera Module DVD Software Player